JANOS,
THE STORY OF A DOCTOR

by

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TO MELANIE
MY BELOVED WIFE

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PART ONE

SCIENCE POLITICS AND PERSONALITIES

CHAPTER I

BEFORE WE START

IT IS NATURAL curiosity I feel, to want to know rather more about a man with whom you have to deal than just whatever happens to appear on the surface. It is understandable curiosity too, because to know more means to understand more—I hope. And as I am anxious to establish a rather personal relationship with my readers it is as well that they should know quite a lot about me before we start.

I don t want to go too far back, but the etymology of my name, as explained to me once by the distinguished Orientalist Becker at one time Prussian Minister for Education, is interesting, and offers a convenient starting point. 'Pelesch" he believed, meant 'the stranger" The strangers driven from the East to the West, found a home in Palestine (Peleschtina) A dropped e" and there I am, the stranger—but one who subsequently found himself at home in many lands.

Five thousand years is a long time. It was long enough for my ancestors to find their way to Bohemia. How I really don t know But coming down to more recent years I do know that both sides of my family wandered back into Hungary My maternal grandfather and his three sons were all doctors, and on my father's side a Bamberger my great uncle, was one of the pioneers of the Vienna medical school. It may well be therefore that some sort of hereditary bent played a part in making me a doctor

A certain wanderlust was very evident on the maternal side. My mother's family came from Alt-Ofen, a mediaeval settlement on the Danube not far from Budapest. My grandmother née Spitzer had an uncle named Moses, an incorrigible sailor He won some fame in the scientific world of his day by sailing round the world on no less than three occasions My maternal great grandmother came from the priestly tribe of Loewi. One of her uncles left Alt-Ofen as the result of a pogrom, and ended up in England, where he settled down, changed his name to Lion, and produced the female child afterwards to go into history

as the notorious Lady Hamilton, who, despite, or perhaps because of, her defiance of deep-rooted social conventions, exercised no small influence on the history of this country

But coming down to our own day—or yesterday—the wander lust was still in evidence in my family Three of my mother's brothers were no home keeping youths. The oldest went to Egypt and then to Syria, and finally to Bucharest, where he worked as a doctor and an exponent of the Vienna school. The youngest went through the Bosnian campaign in 1870 as a regimental doctor whilst the second brother Alexander fought on the side of the Turks for twenty years in all the Balkan wars, until finally he established himself in Budapest. This uncle played a decisive role in my life. He arrived home with a small fortune and took over the practice of my grandfather in what was then a smallish village known as New Pest, though his main interest was in dentistry which was then rapidly beginning to take the shape we know to-day

My brother eighteen months older than myself, was suffering from very severe rickets Uncle Alexander had his own ideas about the requisite treatment. He took the patient, and me with him as a playmate, to New Pest, where, with the assistance of a widowed and childless aunt of ours, and our grandmother he effected a cure primarily with raw meat and sun baths That was what the modern vitamin treatment for rickets looked like in those early days as seen from the village of New Pest. New Pest became practically our home, and when we visited our parents in Buda Pest it was more or less as guests. The result was that I grew to regard my uncle and aunt as father and mother and my father and mother as uncle and aunt. My relationship to my sisters was also more that of a cousin than a brother It was only when I was eleven and my parents had a new son, introduced to me as my brother that I began to realize more clearly the truth of my family relationships In any case, when I take stock of my feelings now it is quite clear that my uncle and aunt were nearer to me in relationship than my mother and father

I believe that the love of children for their parents is acquired (the result of parental care) and not inborn, whereas the love of parents for their children is natural and inborn That is why it

seems to me, the Commandments require that children shall honour their parents, but deem any similar exhortation as from *parents to their children unnecessary* I have always accepted this principle in my relationship with my own children. The love of children must be won—and held And I have always done my best to win and keep it.

In my early childhood I enjoyed all the love and care at the hands of my uncle and aunt that most children find in the home of their parents. Owing to my uncle's earlier affiliations, many Turks came to our house as visitors, chiefly when they were making their pilgrimage to the grave of Guel Baba, once Governor of Hungary under Turkish rule and a sort of Saint for the Moslems. In consequence, Turkish was often spoken at home, and what I retained of it stood me in good stead later From my grandmother I learnt German, with the servants I chattered in Slovakian, and from my Bucharest cousins, with whom I was later educated, I picked up quite a smattering of Roumanian. Our old Austro-Hungarian Monarchy was poly glot indeed

My grandfather left no fund of scientific or medical knowledge behind him, but quite a lot of poetry which my mother was accustomed to recite on suitable occasions right into her declining years.

My paternal great grandfather felt no attraction for science or medicine. He went in for brewing, and from very small beginnings he made a very good thing out of it, and afterwards used much of his quite considerable fortune to found a number of charitable institutions and establish the first Freemasons Lodge in Hungary All of which appears to have contributed greatly to his popularity for I can even remember an inn called "The Good Old Plesch" It was whilst living in this inn that Carl Goldmark composed his famous opera "The Queen of Sheba" whose music is largely based on Hungarian folk-song motives. As so often happens, the old gentleman's sons played skittles with his fortune, and when it came to my father's turn it was more a case of saving what was still to be saved. This he did, and more, for he succeeded in building up the business again. He was a man of some capacity but his bent was towards art and literature rather than business, and when he

died, which he did at the early age of 53 he could at least feel with satisfaction that there was little he had missed in life.

As I have said, I grew up in New Pest as the playmate of my older brother and when he went to school I went with him, more for the fun of the thing and to be with him than anything else. Educational institutions were rather different in those days. In the upshot I remained with him throughout our whole school period and for twelve years, right through to the University I shared the same school bench and learned from the same books. I was not yet five when I first went to school and *in consequence I missed some of the joys of childhood.* I am not in favour of sending children to school too early The sixth or even seventh year is quite soon enough. It is a very difficult matter to teach a child book knowledge before then. In my case, I missed quite a deal of playtime by my ambition not to lag behind the others who were all much older than I was. It meant very hard work for me to keep up with boys eighteen months older and the unequal struggle went on well into high school.

What little free time I had was devoted to music. The organist of the village church had taught me to play the piano. He not only taught me the elements of music, but through him I learned to love it. When I look back now he appears to me, above all, as a paragon of patience. By the time I was nine years old I was accepted by the Budapest Conservatorium, and I was already able to play a number of classical compositions—after a fashion.

I retain very vivid memories of this patriarchal life in what was, after all little more than a primitive Balkan State just awakening to modern civilization and culture. Many things made an unforgettable impression on me. For instance, the introduction of lump sugar henceforth making it unnecessary for the cook to go for the sugar loaf with a hatchet. I remember too, my introduction to the automatic swing door At the first Hungarian National Exhibition in Budapest in 1885 it left me dazed and with a bump the size of a pigeon's egg on my forehead. The first sight of the electric glow lamp was awe inspiring. The replacement of the old tallow dip by the stearine candle and of the primitive oil-can burner by the round wick

had been impressive enough, but this was revolutionary However as far as we were concerned, practical lighting technique really emerged from its swaddling clothes when the swallow-tail gas-jet gave way to the incandescent gas-mantle. The electric arc lamp was still too unreliable for general adoption. The gas-mantle, however revolutionized our night life.

And then there was the first electric tram. It is difficult to imagine now the almost mystical awe it inspired The peasants fell on their knees at the sight, crossed themselves and prayed hurriedly against the evil spirit that threatened the world, whose end was now quite obviously in sight. It took a long time before they could be persuaded to climb into an infernal contraption which moved without visible assistance from any method of locomotion they were acquainted with.

I remember the first penny farthing, too It took a very agile man to mount the thing successfully and wobble away The next step was the transmittor wheel—and the constantly punctured pneumatic tyres. And then came the motor-car But in the beginning that was a joke. Horses had to pull it home too often for the public to take it seriously and the laughter was loud and mocking When the aeroplane arrived it was a serious matter from the first. It had to pass through no stage of mockery

The Hungary I knew flowed with milk and honey like the land of Canaan. Its people were poor in possessions, but no man went short of food. A dozen eggs cost 10 kreutzer a young roasting chicken cost from 12 to 15, a pound of bacon about the same, and so on. 100 kreutzer was a florin, and a florin was about 1s 6d. To encourage travelling, Baross, the Minister for Transport, introduced the zone system permitting ticket holders to travel twenty four hours along the longest track in the country for 4 florins. High-School fees were 10 florins a year The half year term at the University cost 30 florins, and an industrious pupil of promise could enrol even without that small payment if his means were insufficient to meet it.

For giving supplementary help to backward students I earned about 10 florins a month, and that was amply sufficient to pay for theatre and concert visits, though in the gallery of course. You could stand for 20 kreutzer and sit for 40 For

florin in those days you could get into the promenade parquet of the Vienna Opera House.

Educational facilities were cheap and readily available, perhaps too much so, because they produced a dissatisfied intellectual proletariat, which whilst it contributed much as a living ferment to contemporary development, was always an element of unrest and disturbance.

I entered the world of artistic creation for the first time when, as a child, I was permitted to help actively in the making of hussars and peasant girls out of dough in a neighbouring bakehouse. A further stage in the process permitted me to decorate cheeks, lips and top-boots with a red and sugary pigment. In the local choir a lusty voice, I earned 10 kreutzer every Sunday But all these innocent pleasures came to an end when we had to go back to town in order to go to High School. Hungary was culturally backward, and the standard of education was low My teachers were themselves wretchedly educated and trained and what was very much worse, their attitude to their pupils was hopelessly wrong They seemed to think that the best way to control their classes was by harshness and severity and an unapproachable reserve There was no attempt to treat a pupil as an individual and no understanding for individual characteristics. In those days the educational system was in the hands of the ecclesiastical authorities and therefore great importance was attached to religious and classical subjects, whilst the natural sciences were very much neglected. This was particularly so in the Catholic High School in which I was educated

History was completely emasculated, and in particular all mention of any movement or rebellion for freedom was sternly expunged. And with good reason, for the Habsburgs were right in regarding their Hungarian subjects as potential rebels. Hungarian children were not to be encouraged in that direction, not even by the knowledge of indisputable historical facts. Libertarian ideals were to be banished even from the imagination. The result of this suppression was, as one might have expected exactly the contrary Adorned with the national cockade, we met together secretly to brood over immature plans for freeing Hungary from Habsburg tyranny However

nothing very serious resulted from these youthful conspiracies, though somewhere around 1890 it was decided at one such conventicle that all signs in German should disappear from the streets, and then, whilst the Hungarian police looked the other way bands of youthful patriots roamed around painting out every German sign they came across This went on for about a fortnight, by the end of which time Budapest had been thoroughly Magyarized This rise of nationalism met inevitably with repression, and so the game went on. But from a game it became deadly earnest, and it ended only with the dissolution of the Habsburg monarchy

Both sides did everything they could to exploit the high spirits of youth, and young people were drawn into the struggle and brought up in a spirit of party and national hatred, and taught every mean trick of the political struggle. The unsteady torch of propaganda rather than the clear flame of truth lit our path, and every cunning device and distortion was practised to keep us from discovering the truth for ourselves. Even the fine and noble melody of Haydn was misused and exploited in the interests of political hatred and spite. In Germany it was *Deutschland, Deutschland über Alles* whilst it also served as the National Hymn of the Austrians, *Gott erhalte Franz den Kaiser* and in all the subject countries of the Austrian double monarchy the tune was hated as a symbol of Habsburg tyranny But when it was played in public everyone had to stand up

One day in a café we youngsters persuaded the gypsy band to play patriotic Hungarian melodies in order to annoy a group of Austrian officers. We succeeded and they then insisted that the band should play *Gott erhalte Franz den Kaiser* to the playing of which we had to stand up But we made a secret collection for the *Zigeunerprimas* and handed it over with the instruction that he should keep on playing the hymn which he did. The result was that although we had to stand up the whole time and were unable to chatter and drink, the officers had to stand to attention The joke was on them, and they got tired of it before we did and took themselves off leaving us victors in the field.

To be brought up in false ideals is a dangerous thing for an adolescent. The soul is then in the formative stage and the first

strong impressions it receives are indelible. They can be overlaid later but never completely erased If every possible other merit of Freud and Adler were one day denied them just one thing would have to remain as a lasting service they revealed and explained the soul of the child.

Hatred was, I am afraid injected into us as children one might almost say from the cradle on. Hatred is a tremendous source of potential energy Evil influences have always exploited it, though certainly never so deliberately systematically and brutally as the Nazis have done in our day but it was bad enough when I was a boy The pretexts for stirring up hatred were then much the same religious, racial, national or social forces which have again and again been invoked throughout world history by those eager for power And always, whether consciously or unconsciously they have been used as means to a selfish end. Against it all there is one, and one only effective means love. Love, the formal opposite of hate, and its true antidote.

When I look back now I see that I lived in an atmosphere of race hatred. Every national group under the Habsburg double monarchy was anxious to retain its own narrow and circumscribed existence Throughout Europe national groups were striving to establish national States. Italy became nationally united, and so did Germany Serbia, Bulgaria and Roumania were founded in this same period Pan-Slavism, Pan-Germanism and *Italia irredenta* flourished. The unification of national groups was the one aim. The idea of internationalism hardly existed.

But internationalism is not a new idea indeed it has long existed in many harmless, unconscious and naïve forms Soldiery were often international, and although two countries might be at war with each other neither thought of prohibiting the sale of goods to the other And that rather happy-go-lucky attitude existed until Napoleon the great apostle of modern nationalism, thought of instituting the continental blockade of England There was even an international language—Latin. Of course, this embryonic internationalism was very far removed from what we mean to-day by the term. There is more than a grain of truth in the paradoxical contention of H G

Wells that nationalism was much stronger in the years that led up to the two world wars than it was during their course.

The thirst for knowledge was growing in Hungary. There were never fewer than sixty pupils in a class. The teachers hardly knew the individual pupils. Each pupil was called upon not more than two or three times in a whole term, and his answers were used to establish a rough sort of classification. Our teachers got up to all sorts of tricks in order that we should not be able to calculate when we were likely to be called on. With professional sadism they developed a technique for picking on those who were least prepared. The sigh of relief of fifty-nine pupils when the sixtieth was called upon was almost audible. The nervous anxiety of the whole class until it became clear who was to be the victim seemed to satisfy some sadistic lust in our teachers. And of justice there was very little. Favouritism was rife, and the sons of rich or influential fathers were privileged. Arbitrary treatment of this kind left its mark. Small wonder then that I have no very pleasant memories of my schooldays. And I never looked back at them with any regret for their passing. On the contrary, the eight years of fear and anxiety they represented have never gone entirely from my memory and I have suffered them again in nightmares even as an adult.

And the worst torture of all was the matric. Only a subaltern, sadistic and malicious stupidity can explain why this wretched medieval institution still exists. 'Why should they be any better off than we were?' And indeed the whole institution is grossly stupid. After eight years, a teacher, if he's worth his salt at all, should know without need for examination just where each of his pupils stands. The fate of young people ought not to depend on the results of one examination, on the chance results of a momentary situation. Up to the eighteenth year examinations, indeed, education altogether have no more than a hypothetical value. It is throughout his High-School period that a youngster experiences the most difficult stage of adolescence. More than at any other time in his life he is the product of his glandular activity. Not only his character but also his intellectual capacity is subject to great variations. The youngster is fighting his way through to manhood, the girl to

very good boy was Franz Neumann, the son of a regimental doctor Later on he began to study law but he wrote a short story which attracted the attention of the newspaper editor Josef Vészi by its humour and originality Vészi recognized genius at once and he sent the young man to Paris with in structions to write back to the paper about his impressions and generally about anything else that came into his head That was the beginning of the successful literary career of Franz Molnár

He later became the patron of Budapest's night life, the centre of a cheerful Bohemia, the source of a certain species of capri cious wit, good humour laughter and light hearted living Franz Neumann-Molnár's plays have won him world fame and eputation. But they represent only a small part of his contri ution to gaiety He is a never-ending fount of humour witty leas, *bon mots* epigrams and ludicrous but keen observation, nd those around him are to be envied their privilege. A wit nd a jester by the grace of God. His masterpiece is Liliom" n which, in a legendary form, he cloaks an apologia of his nsuccessful marriage with the highly talented Margit Vészi. Ie is now in New York, where it is to be hoped he will find ew inspiration.

One evening rather late I dropped in on him. He was about o go to bed. He went. As he took off his slippers before urning in I noticed that he did neither of the two things ordinary mortals do either kick them off anyhow or place them neatly side by side. Franz Molnár placed them neatly toe to toe. I watched the performance in silence, but when he was finally in bed and comfortable I could not suppress my curiosity There was usually some good reason for Molnár's oddities

"What's the idea, Franz?"

Oh, that?" he said 'Well, look, János, if you put them side by side both staring straight ahead they remind me for all the world of a married couple who've just had words I don't like it. It depresses me. But see how friendly they look nose to nose. They look so happy they cheer me up and I sleep better

I laughed—but I found the idea somehow compelling Since then my slippers always present the same contented picture. But back to my grouse

The fatal cancer of our educational system is its over formalization. The task of the school (apart from giving the child a happy youth and sending him out into the world with pleasant memories) is to prepare a boy—or girl—to take his proper place in adult society He must amongst other things, be taught to discipline and, if necessary sacrifice himself in the interests of society as a whole. I expect a lot from a long overdue educational reform everything that I was not given in my youth. I don t know, of course, how my life would have developed if I had enjoyed a reasonable schooling, but I do know quite certainly that whatever good I may have achieved in the course of my life was in no way due to whatever it was my schooling gave me on the way

However since those days schooling has, in fact, made enormous strides, but, despite that, backward Hungary of sixty years ago might well serve as a horrible example to be taken to heart by many institutions extant to-day not only in still back ward countries, but, for instance, both in Germany and in England, and for this reason I have taken some space here to deal with what was perhaps in many respects the most decisive period of my life—my schooldays

I had no difficulties with the choice of a profession. I grew up amongst doctors, and from my earliest childhood I never had any other idea but to become a doctor myself. A hundred years ago there were no doctors in our sense of the word, and the training of doctors was more or less limited to the performance of such services as were likely to be required in the field. This significance has been clearly retained in the German word *Feldscher* As a result surgery was greatly favoured, and purely surgical schools were to be found in most progressive countries. It was only later that they developed into medical faculties. Thus in Austria the pioneer work for the modern School of Medicine was done by the Josephinum" the Vienna Military Academy in Germany it was the Pepinière. and in France the Salpetrière. Up to the outbreak of the first world war Russia had no proper university medical faculty or a military academy of medicine. Schiller was the son of a *Feldscher* and was entered as a pupil of the Wuertemberg military medical school. Most of our present-day faculties

can be traced back to such origins. It was only about a hundred years ago that the professional status of the doctor was raised by the introduction of examinations and the presentation of diplomas. Special diplomas were given for surgery obstetrics and ophthalmics, in addition to general practical medicine. However that was facultative. Soon afterwards this specialization ceased and a medical man had to take an examination in all subjects, for which—if he passed—he received the sonorous title of "Doctor of all Degrees" or *Medicina Universa Doktor*

Whilst there was always a lively interest in the materials out of which life was composed, and whilst the study of anatomy was already far advanced, interest in the interaction of these basic elements, interest in their actual function, developed only comparatively late in the day and it was left for the past hundred years or so to extend our knowledge of the relations between individual organs. With the development of mechanics, electricity optics, chemistry and bacteriology problems arose which gradually dominated the whole outlook of the civilized world. This was the atmosphere in which I was born, and the world in which I began my studies of medicine.

CHAPTER II

BUDAPEST

As I WRITE these lines the wireless announces that my beloved Budapest has been battered, plundered and set on fire by the barbarian malice of German troops, and my thoughts wander back to the home of my childhood, old Budapest. In those days I saw it with very different eyes, of course, but after I had lived and travelled abroad for many years and then returned there, it became clear to me that both ethnographically and culturally it represented a sort of water-shed between Asia and Europe. A glance into old Buda on Saint Stephen's Day was enough. Masses of people from all parts of the country made the pilgrimage to Buda to gaze in awe at the Holy Hungarian Stephen's Crown They came in their tens of thousands, and it must have been clear to every objective eye that Europe stopped here and Asia began

There sat the peasants in their sheepskin cloaks and their tall pointed fur hats, a garb that served them just as well against the biting cold of the winter as against the burning sun of the Hungarian *puszta* in summer. Their long black hair shone with fat and their moustaches either twirled up to points or hung down around the lips in a half-circle as in the classic statue of the dying Persian. They kept themselves clean according to their lights, but they certainly didn't know what a bath was. The women sat next to their lords and masters like docile slaves. The wealth of their men was demonstrated by their clothing. The richer they were, the greater the number of richly worked petticoats they would wear and the finer the material: one petticoat worn over the other until in the end they almost stood out straight like boards. Over their heads and crossed over their breasts were gaily coloured kerchiefs, and on solemn occasions such as this all their rich silver ornaments hung from ears and neck. The finishing touch to this holiday finery was given by beautifully made top boots of red saffian leather.

On the streets and in the squares of old Buda on such days the traditional *goulasch* simmered and bubbled appetizingly in great cauldrons, and the famous smoked garlic sausage and the paprika bacon was present in great quantities. The *tarisznya*, or shoulder satchel, of the peasant held all his immediate needs, and the hunk of paprika bacon was always amongst them. Most of them slept either in their peasant carts or in barns and outbuildings. On such days old Buda looked as though it had suffered an invasion straight from the Persian plateau or from South Tibet. These people were little touched by modern civilization and its achievements, and with open mouths and round eyes they would gather and stare at any new evidence of it.

It was in these days that Budapest (as the contiguous towns were soon called) began to imitate Western European culture. The shining example was Vienna. Means of transport generally were extremely primitive in Budapest, but despite the lack of almost everything else, there had to be an underground railway. It must be one of the oldest in Europe, and it extends no farther to-day than it did on the day it was solemnly opened. Ministries, public buildings, theatres and sports grounds were all

present in miniature. And like everything else, modern governmental institutions and even a democratic constitution were quasi in existence. The *Magna Charta Libertatis* of the Hungarians dates from the thirteenth century, just like the English, but in Hungary there has been very little further development of the rights of the individual citizen Everything was there in the Hungary of my young days, but only partly developed and in a very rudimentary form

The Hungarians are a naïvely self-satisfied folk. They never tire of telling each other that all the things they have are the very last word in desirability And in the end they come to believe it themselves. But they must be given credit for one thing at least: they did recognize the æsthetic possibilities of their capital clustering round the proud Danube and surrounded by fine hills. Even in the eighties there was already half a mile of fine embankment, though only two bridges joined the two parts of the town. Buda (Ofen) therefore developed only slowly and remained a sort of reserve of the Swabian peasants who had settled there in the eighteenth century In this enclave they retained their manners and customs, their language and their costume almost uninfluenced by the world around them. The inhabitant of Pest went over to Buda only as an outing' but later on, when the value of fresh air and sunlight became more and more recognized, and particularly when modern means of transport developed, this changed rapidly

However even after Pest had been thoroughly modernized, Buda still remained in the Theresian period with its low built houses in the pleasant old Austrian baroque style, and its cosy little inns where one could sit agreeably and drink the home-fermented wines There are vineyards up the sides of the Ofen hills, and the vines yield a grand *Heurigen*. When we were boys we used to go gleaning" every autumn in the vineyards after the picking

Completely isolated and dominating the countryside the Schlossberg reared up beside the Danube, and on its brow stood the Royal Palace. When I was a boy the Palace was a one-storied building, broad, squat and yellow something like a barracks, with window shutters painted a Schoenbrunn green and decorated with many small towers. Altogether it made an

agreeable picture, ample and quite stately though its relation to the Vienna Burg was much that of a shooting-box to the House. From time to time the Monarch would unbend sufficiently to take up a short residence in the Palace to visit, or rather be visited by his "loyal" Hungarians They were great days of pomp and ceremony Hungary's aristocrats and notabilities disinterred their finery brocades trimmed with costly lace and decorated with precious stones, and drove off in style to the Palace either in open carriages drawn by four horses with Pandours on the box, or riding on horseback, to present themselves to their ruler

The Hungarians were elegant and gallant courtiers and they were not prepared to lag in any way behind the other aristocrats of the monarchy But the most wonderful and stunning uniforms of all were always worn by the famous military tailor Moritz Tiller a magnificent figure with his great red beard out bearding even Kaiser Friedrich himself. By some happy chance Tiller had become Consul-General for the comic-opera State of San Marino and it was therefore quite impossible to leave him out when invitations were issued to the Diplomatic Corps the European balance of power might have been disturbed. Moritz eagerly seized every opportunity of showing himself as the diplomat rather than the tailor and his workshops provided him with the most gorgeous creations his fertile brain could design.

In the nineties the simple Palace on the hill became the scene of tremendous extension and rebuilding, and the Palace garden and the *Bastei* were included in the architectural plans. The very difficult artistic task was very happily solved by the architect Nicholas Ybl, who also designed the Hungarian parliament, which was executed by the architect Alois Hansmann. With the extension of the grand quay the sweep of Budapest along the Danube could be equalled in magnificence by very few towns indeed But behind this imposing metropolitan façade everything was rather meanly provincial, asiatic proletarian, drab and half finished It was part and parcel of the character of the old Austro-Hungarian monarchy to take the plan for the finished article. For instance, the old classic National Theatre was pulled down as not big enough, and

atmosphere of old Budapest had a sort of familiarity and intimacy which remained to some extent even throughout its later and more modern development. When the population topped the million mark many many thousands still knew each other and the boulevard casino still existed. Even after Budapest had adapted itself to international tourist traffic it still retained much of its old lovable character.

Budapest is a spa. Apart from the noble Danube, it has numerous springs whose waters are suitable for the treatment of many sicknesses and infirmities. With their genius for spas the Romans did not fail to recognize the health-giving qualities of Budapest and they built the magnificent Aquincum Baths around its natural hot water springs, and they are still in use to-day. In addition, at various points in Buda, there are five natural hot water springs and mud baths for gout and rheumatism. At the foot of the Blocksberg there is the world famous *Hunyady János* bitter water spring, and on Margaret Island there is a hot sulphur spring. Once these valuable natural springs become really known Budapest may easily become a world spa.

The temptation to over-eat is very great in this Hungarian land of Canaan, so it is as well that the town has been so liberally provided with the means to bathe and drink away the effects. Not only is the available material of the very highest quality but the Hungarians are very good cooks. The fish in the Danube are worth a chapter on their own in any gastronomical guide, and there is no shortage of rich fodder for the cattle, so the quality of Hungarian meat is very high, and a roast goose in Hungary for the first time is a gastronomical experience not to be easily forgotten, whilst the pastry cunningly formed from the best Hungarian wheat is worthy of all the lyric poems that have been made in its praise. And beneficently floating over and above a wealth of rich material is the incomparable *genius loci*.

These reflections and pleasant memories may seem to have carried me away and broken the thread proper of my story but not so. All this contributed signally to creating the atmosphere in which I grew up—not merely as a doctor but as a connoisseur of wine and food.

It was with a great feeling of relief that, only just sixteen years old, I saw myself enrolled as a student in the Medical Faculty of the University of Budapest. The five subsequent years passed happily and therefore perhaps without any particular incident. My professors were for the most part the product of foreign, chiefly German, universities. There was hardly one amongst them who had done any real pioneer work on his own account, though at that time the development of medical science was going forward at a tremendous pace. Generally speaking they were good, reliable sponges who had sucked up the knowledge that others had won, and to the best of their ability they fulfilled their schoolmasterly task of providing us with the sound basis we required. Hardly one of them had the qualities which make the independent inquirer but perhaps it was just their reliable mediocrity which made them such good teachers. Generally speaking a good teacher must necessarily be limited. A successful teacher is the man who can best transfer book learning to his pupils and do it in such a fashion that they go away firmly convinced that they have received the last word on the subject.

Without confidence no confidence can be created, and no man of really high intelligence can have the unquestioning confidence which is necessary for the good teacher. Doubt is the fundamental principle of all inquiry. People who begin their remarks with "no" are irritating and unpopular, though interesting. The yes-men are soothing and popular, if a trifle dull. They are the born clubmen, and their club need not necessarily be the Drones. The doubters are liked by the few; the yes-men carry the masses with them. The average student is, after all, a representative of the mass. All he wants to learn is what is going to be useful to him when examination time comes round. The result is that the man who is not bothered by any problems does better as a teacher than the sceptical genius. Robert Koch, Svante Arrhenius, Albert Einstein and other really great men were freed from any obligation to hold systematic courses. There is nothing more deadening to the intellect than the constant teaching of the same thing year after year. I remember on one occasion attending a lecture by the economist Adolph Wagner. And in the middle of it the famous

Armchair Socialist" hesitated, lost the thread of his remarks and finally explained apologetically

'For eighty terms now I have always told the same anecdote at this point, but you must forgive me, I can t remember it for the life of me at the moment.

Automatic repositories of professional wisdom are very necessary We should be grateful to these scientific hewers of wood and drawers of water just as we are grateful—or are we?—to the dockers who unload the rich products of other countries for our benefit. However personally I avoided all lectures whose gist I could get out of a good book more easily and more quickly "Absence from lectures was noted, so although I saw to it that I occupied my place in the lecture hall my time was given to the study of literature and art, or to caricaturing the grandiloquent poses of my teachers.

Anatomy was for me nothing but a duty to be performed, and a blue-white cadaver cold to the touch was always something I found disagreeable, and as for fumbling around inside it, that disgusted me. There is a current idea that suitability for the medical profession can be measured by the indifference or even pleasure with which the individual can devote himself to unappetizing matters. By such standards I am not very suitable. Corpses and excrement are as disagreeable to me to-day as ever they were, and I have never got used to them. My natural revulsion is overcome anew each time by my feeling of duty

However I studied anatomy with great diligence, and I must have amassed quite a considerable degree of knowledge and skill because in my third term I was appointed a demonstrator The truth is that my feverish industry was prompted by a strong desire to escape as soon as possible from the dissecting room with its corpses. However I had a year of it, and what I saw made such a deep impression on me that I have always retained the topographical anatomical angle even when examining the living body But in the first two years of my studies I could eat no meat and I became a strict vegetarian. I lived again only when I could turn my attention from death to the living organism, and I have remained primarily attached to physiology and physiological pathology down to this very day

It is not only death that I hate, but any form of degeneration in life. The wonderful automatism of living phenomena with their perfectly inter acting parts and functions, the undisturbed process of life without disagreeable bodily or organic feeling, that is worth while existence to me. Sickness and disabilities are unworthy of life, and therefore the true doctor must be an optimist out to do everything possible to put an end to an unworthy condition, to abolish sickness and cure his patient as soon as possible. His greatest pleasure must be the sight of the healthy person whom he has cured. The more a doctor hates sickness the livelier will be his ambition to get rid of it, and the more elementary will be his urge to heal. As I felt this way *from the beginning it is natural that my early medical schooling* did not altogether satisfy me it was concentrated almost exclusively on the organ and very little attention was paid to the organism as such.

As I have said my teachers were good and reliable enough. They knew everything they had themselves been taught, and everything there was in the book. They were the expounders of greater teachers, but the pioneer spirit of the greater men was lacking Anatomy was in the hands of Mihálkovics, a pupil of Waldeyer the physiologist was F Klug, a pupil of Ludwig Genersich, the pathological anatomist, was a pupil of Rokitansky the general pathologist, Hoegyes, was a pupil of Pasteur the Internist Stiller was a pupil of Oppolzer the dermatologist, Schwimmer was a pupil of Hebra and the ophthalmist, Schulek, was a pupil of Graefe. Thus they were all more or less vigorous and good products of a sound stock, only surgery and obstetrics were in the hands of men who were themselves pioneers Kovács and Kézmárszky Kézmárszky was the direct successor of the great Semmelweiss, himself the first successful campaigner against child-bed fever about twenty years before Pasteur and Lister

The opportunities for medical learning in Budapest were unique. Not only did the sick of Hungary flock into the capital for treatment, but it was the medical reservoir for the whole of the Balkans, so that beyond a doubt there was an accumulation of medical material in Budapest which hardly any other university in the world could equal. A student in Budapest

could amass a wealth of experience which a junior lecturer assistant would be lucky to meet with in other and less-frequented universities, and the student in Budapest could come by it much more quickly As far as I was concerned I made good use of my student years, and I have every reason to be thankful for everything that Budapest offered me.

I have said that the memory of my schooldays weighs on me still like a nightmare the same is true of my short period of military service. At the age of eighteen I joined the Royal and Imperial Army (K. and K as its initials read) and in 1896 I was sent to Infantry Regiment No 6 The headquarters of this regiment was in Neusatz, a town with a mixed Serbian-Swabian population in the Banat where the Save flows into the Danube. Thus, like so many other K. and K. Regiments, this one, too was a hodge-podge of nationalities, and this applied not only to the other ranks' but to the officers corps as well. The heterogeneous elements which made up the regiment were not held together by any common idea, say the institution of monarchy as such, or by a common patriotic spirit. There was nothing but a vague seignorial loyalty to the House of Habsburg and its traditions—and a common language of command German, to keep us together

I don t suppose there is any very great mental or constitutional difference between the soldiers of one country and the soldiers of another The differences which subsequently exist are, I take it, a matter of education and training, a matter of the spirit in which the soldier is trained. He must be given some idea of the reason for his being a soldier in the first place, then he learns to use whatever his particular weapon may be and gains confidence. He must, of course, have confidence in his officers, too and he must be given the possibility of acting and thinking for himself within the limits of his own position. Only if the soldier has some general idea of what the whole thing is about and where he fits into the military scheme of things will he be able to give his best. The initiative must generally come from the officers, of course, for the men will not do more than is expected of them, and be demonstrated by example.

There was nothing, literally nothing of all these elementary requirements present in the K. and K. Army The soldier did

his duty" purely mechanically because he was ordered to do so and was aware that it would go ill with him if he didn't. As far as he had any spirit and intelligence they were suspended for his period of service. The first thing the Austro-Hungarian soldier was taught was not to think, but merely to do as he was told. There was no discipline in the true sense, but slavishness and servility and as the punishments for the slightest offence were extremely savage, each man went in constant fear of the man above him. A common punishment frequently imposed for very minor offences, for instance, failing to "jump to it smartly" or being unfortunate enough to drop a rifle, was six hours in irons. Irons were placed on the right wrist and the left ankle and joined together by a bar

The next stage of physical punishment—still regarded as a mild one to be imposed for comparatively trivial offences—was similar to Field Punishment No 1 but much worse. The hands and feet were bound then a rope was passed through the bonds and the delinquent was drawn up by means of a ring in the wall until only his toes touched the ground In the beginning, when he was still fresh, the victim could manage to retain his balance, but when he became exhausted and hung limply the pain would become so intense as to make him lose consciousness. But the K. and K. Army Punishment Regulations were not completely inhuman they provided for the presence of another soldier complete with bucket of water to splash in the victim's face if he lost consciousness, thus restoring him to full feeling for as long as possible throughout the period of the punishment.

Medical students serving their term were used as far as possible for this service, and so from time to time I found myself in the role of second executioner Authority was maintained in the K. and K. Army solely by threats and fear and recruits were let know it from the very first day of their service, when they were *lined up before an officer who reeled off the Army Regulations* at a speed which made it impossible to understand any of it except the last paragraph of each regulation, which was read out more slowly and with particular emphasis so that every one should hear that the punishment for violation of the regulation was "execution by shooting' It is not surprising there

fore that the men never performed their duties with any pleasure or real zeal The result was a regiment which looked marvellous on parade whilst underneath the fine show was resentment, bitterness, hatred contempt and a spirit of vengefulness. A Czech humorist once wrote "What a marvellous army they had! All the uniforms cleaned and pressed all the buttons and buckles beautifully polished all the movements and manœuvres hit off to a t And then what did they go and do? Why packed it off to war in 1914 and spoilt the lot."

It was indeed in war that the fatal weaknesses of such an army became clearly visible. With the possible exception of the higher staff officers the only idea of its officers' corps was advancement to higher pay and pensions, and there was neither real interest in the profession of arms nor real enthusiasm for the calling

The term of service in the ranks was three years but for students and others who had reached a certain examination standard the period was one year only and such recruits were termed the 'One-Year Volunteers though there was nothing voluntary about their service. We medical students did only six months in the ranks and then six months in a military hospital after the conclusion of our medical studies. I think only with horror of my short term of service, during which I suffered senseless maltreatment and chicanery in the strait jacket of an idiotically inhuman system of training Everything was done for show The whole army was little more than a decorative and expensive plaything of his Royal and Imperial Majesty Even at manœuvre time more attention was paid to clean tunics and polished buttons and accoutrements than to military efficiency The aim of Austro-Hungarian army training was to turn the men into mindless and soulless automatons, and it succeeded. To take cover in battle or to dig a defensive trench was declared to be cowardice, and when the war did come it happened more than once in its early stages that cavalry formations were hurled against prepared positions, the horses going hell for leather the men knee to knee, shouting hurrah and flourishing their swords whilst enemy machine-guns mowed down men and horses like ripe corn.

When I first visited Germany in 1898 I found that the training

of the German Army was not on a very much higher level, and this remained true for some years, but, at least, the treatment accorded to the soldiers was juster and more humane, and there was a real patriotism amongst the masses, who enthusiastically supported both Reich and Dynasty so that the German soldier conscript though he was, served willingly and even with enthusiasm.

CHAPTER III

THE STUDENT PILGRIM

FOR TWO MONTHS in every year I was able to satisfy my thirst for medical knowledge with the great ones of my time. This was possible because the terms in Hungarian Universities started and ended at different times from those in the rest of Europe owing to the early and very hot summers of Hungary Our university term ended at the beginning of June, and from then until the middle of August I was able to go off to Austria, Germany or Italy—to any place, in short, where some great man was at work whose reputation attracted me. For that period at least I could sit at his feet and imbibe knowledge with youthful enthusiasm, and let myself be inspired.

In Italy there was the tradition of Morgagni, Spalanzani and Scarpa. First I went to Padua, which was not only the centre of Italian medical knowledge, but possessed the further advantage of being near Venice, whose beauties attracted me greatly and in particular the Ospedale Civile and the great equestrian statue of the Condottiere by Donatello. Every afternoon in Padua the Café Pedrocchi was the meeting place of the whole medical faculty The libertarian outlook of Galileo and the spirit of scientific inquiry informed the proceedings. I owe much to the Professor of Internal Medicine de Giovanni and to the great surgeon de Bassini who were both at work in Padua at the time. In Pavia Scarpa looked down on us benevolently if a trifle gruesomely from a jar of preserving alcohol. In Bologna modern neurology was in process of birth In Naples it was bio-chemistry In Rome one could learn both history and internal medicine from Guido Bacelli, a leading clinical light

and a well-known excavator of the Forum Romanum. I owe my first real introduction to physiology to Luciani. Thanks to Lombroso and his investigations in Milan a new and fresh breeze was blowing grandly in both psychology and psychiatry I received unforgettable impressions in Italy It was a truly romantic country then a land of genius and a land of happy work—and happy idleness.

If nothing else, Italy could teach a man to laze away his days. *Dolce far niente* is an art like any other and it can be learned In those days there were still real *lazaroni* in Italy I have seen them take a piece of chalk as they lazed in the sun, draw a circle, cut it off into as many segments as there were interested players sprawled around, and then put down a louse (a very easy matter for them to find one) in the centre of the circle and leave it to its own devices. With that the game began. The only active player was the louse. Sooner or later the wanderlust would seize it and it would move around inside the circle. If it made as though to leave the circle the excitement would rise. Perhaps it would wander out to the ring and turn back again half-a-dozen times before it finally left the circle altogether The player through whose segment the louse at last departed took the kitty I have been an interested onlooker at many games and competitions in my life, but I think I have never seen anything quite like this louse gamble—not even a parliamentary debate. It sometimes took hours before the louse made up its mind to leave the circle.

The Italian people have a well-earned reputation as a happy go-lucky crowd. They are indeed, and for that I find them the most lovable people on earth. They don t even take their very real talent seriously They work happily and because they are capable they work easily I have met many happily industrious and creative Italians, but I never met one who overworked himself. The German writer Otto Erich Hartleben always insisted that activity should never degenerate into labour" and the Italians seem instinctively to have adopted his motto They are always busily occupied, but they don t labour And truly labour might be defined as something performed under pressure or compulsion its fruits are rather arid, too deliberately obtained, a little forced and joyless. The Italian way was

different there was more talent and therefore greater ease the performance was more like a game or sport.

An example of the almost gay and easy attitude of the Italian towards his science made a deep impression on me when I first met it in Bologna The hall of anatomy there is certainly one of the grandest in the world it is decorated with wood carving which is amongst the finest art of the *Cinquecento* Before the lecturer a fine amphitheatre sweeps round. It is broken in the centre by a sort of isolated box as in a theatre. This was the privileged place of the *pazzo* the fool or jester who alone had the right to interrupt the lecturer and put questions. A ridiculous and foolish custom? A very wise principle lay behind this fool. The Old Testament tells us that not even the wisest man can answer all the questions of a fool. The fool in Bologna was the Professor's touchstone. It was the fool who returned the scientist to the limits of modesty and true humility if he tended to arrogance and boastfulness. That worthy institution has passed to-day but not because it has outlived its usefulness. Such a fool in our lecture halls to-day would find perhaps more opportunities than ever before of reducing professional blatancy to tolerable limits.

I have lectured more than once before such fools" and I think I learned my lesson One odd instance stands out in my mind It occurred in Chicago where I was the guest of the Nobel Prizewinner and physiologist Carson I don t know to this day how it came about, whether as thanks for past services or in fulfilment of an obligation imposed, but university faculties were accustomed to hold periodical lectures in turn in underworld haunts, and Carson invited me to attend one of them The theme of the lecture was proposed by our hosts it concerned the purpose and the functions of the endocrine glands. I was asked to lecture on the thyroid gland We set off by car to some outlying part of the town and found ourselves in a sort of camp of wooden huts and shanties. Our hosts provided us with a board of real delicacies and although it was during the period of prohibition there was plenty to drink, including the finest liqueurs and wines, a circumstance which puzzled me, but which I gratefully accepted without further question.

Our auditorium which was a big barrack-like shack, was

full of the most dubious characters There were obvious prostitutes of both sexes, pimps, bootleggers, hooligan types in caps and mufflers, excessively elegant fops in top hats and wearing carnations in their lapels, highly-bedizened bar ladies, brothel mistresses and so on They were all members in good standing of what called itself 'The Mixed Pickle Club And not a bad name either It even published its own club organ, which carried, I remember some very witty caricatures The first half of the evening was taken up by the various lectures, which were all quite up to the usual university standard, and accompanied by lantern slides and prepared exhibits for demonstration purposes. Then came a pause during which the assembled public discussed what they had heard After that the discussion began, opened by a gentleman in a check suit sporting a carnation, who apologized for not rising and explained that he was sitting inadvertently on someone else's parked gum.

At first the general trend of the remarks was humorous. We laughed and so did our hosts, and we were soon all in great good humour But before long the discussion became serious and we laughed no more. The objections raised were thoroughly sound. Our audience was not professional (at least, not in our sense) but its level of intelligence was high and it could obviously muster a great volume of good, sound common sense. The questions put were clear and to the point. More than once we were driven into a corner and hard put to it to find a satisfactory answer I don't know what our audience thought of us, but sitting there listening to my colleagues being put through the mill or standing up and going through it myself, I had a very definite feeling that we were not somehow quite all we had thought we were when we arrived. Our scientific knowledge seemed not quite so logical The gaps in it became more evident, uncomfortably evident sometimes, and it struck me that we had all been rather too willing to take over the prejudices of our predecessors without sufficient examination. The frank criticism of this unprejudiced, free-thinking, ingenious and quick witted audience got us thinking again more than once. In my life I have often had to stand up to question and answer before intelligent audiences but I don't think I

have ever been more cleverly mercilessly and yet fairly catechized than I was when I stood on that memorable evening before the members of the Mixed Pickle Club

But to return to Italy the strength of Italian medical training lies chiefly I think, in its artistic imagination, and therefore the Italians are best therapeutically and as diagnosticians. There is no doubt that Morgagni is the father of experimental pathology After Aristotle it was he who first formulated the great problems of natural science. It is by no means exaggerated to trace back modern medicine to Morgagni, and problems of generation and development as they present themselves to us to-day to Spallanzani. Morgagni was the first to bring life into the study of morphology by revealing its functions. Unfortunately there are many even to-day who are not as far advanced as Morgagni was, and who still stress morphology excessively What a waste of time and labour to stuff the student with dead material and ignore its living functions!

Unfortunately the civilizing urge towards cleanliness, order *and punctuality degenerated into Fascist pedantry and resulted* in a lessening of real culture. I think the exchange was hardly worth the candle, and I can only hope that the Italians will one day return to their once indisputable place in the vanguard of human culture. In any case, I have never let myself lose touch with Italian medical thought. To-day I recall with equal pleasure the spiritistic seances I attended with Luciani and other men of science in the Hotel Quirinal and the very arduous laboratory work on altitude physiology with Professor Mosso in the Laboratorio Regina Margherita on Monte Rosa. The laboratory stood at about 10,000 feet above sea level and it was part of my job as the youngest member of the scientific party to see to the culinary side of our wants. Even then I rather fancied myself as a cook, but the first meal I produced wounded my vanity to the quick. *The vegetables in particular were hard* and inedible. The would-be scientist had forgotten that at that height water boils at about 60 Celsius, and it is therefore quite impossible to get vegetables done. My grinning colleagues may have enjoyed their *Schadenfreude* but they didn t enjoy their dinner

Even at Germany's universities the atmosphere was very different to what it subsequently became. By the end of the nineteenth century when I was still a student, the centre of medicine had definitely shifted from Vienna to Berlin. There were still one or two pioneers of the famous old medical school left at work in Vienna, but their star was waning Zuckerkandl the anatomist will not easily be forgotten in the annals of medicine, or Exner the physiologist. And then there was the great Billroth himself, the first surgeon to operate for cancer of the stomach.

In the heyday of the Vienna school the newspapers would issue special editions with professional bulletins on particularly striking operations, so keen was the interest of the general public for everything connected with medical science. It was something like the situation in Paris when the newspapers issued special editions at times of political crisis. The same thing happened when the first tuberculin innoculations were made in cases of lupus. The founder of the modern ear nose and throat school, the Hungarian born Adam Pollitzer was still at work in Vienna, together with my special teacher in nasal pathology Hayek, who died in exile in this country only a little while back. And there was Neusser my first clinical teacher whom I remember with particular gratitude. Amongst the Faculty he had a great reputation as a diagnostician, and as Consiliarius for the Imperial House his prestige was very great He was a quiet and benevolent spirit whose brain encompassed a complicated world of scientific knowledge and ideas I remember the sureness and competence of his diagnosis to this day The only other man amongst my many teachers I can compare with him was Widal in Paris.

I was only nineteen at the time, but I had worked out a method of percussion which I regarded as an improvement, and hesitantly and rather diffidently I showed it to Neusser He recognized its value and usefulness at once and invited me to his house. From that day until his death he was my very good friend But really I think that when he got to know me it was my love of music he appreciated even more than my very real devotion to medicine. Neusser himself was a passionate lover of music, and in addition a chain smoker and a great

drinker of red wine. He was married to the opera singer Mark, and I was often allowed to accompany her on the piano Their marriage was a very happy one. Later on it gave me great pleasure to have their only son with me in Berlin during the period of his Aramaic studies and recall in the presence of such an appreciative listener the happy hours I had spent in their house

I was very glad when an opportunity arose to show my gratitude to Neusser on the scientific field. At the beginning of this century hæmatology came into being as a new field of investigation. I sought and found an opportunity of studying the methods of dyeing blood cells with Hayem in Paris, and still more with Ehrlich and Lazarus in the Charlottenburg Hospital in Berlin. It was these methods which first made diagnosis possible in blood diseases. Full of my new knowledge and borrowed wisdom I rushed back to Neusser Although by that time he was an old man he plunged into the new science with tremendous enthusiasm and before long he had thoroughly mastered it. Typical of the man was the fact that on one occasion he took a patient suffering from Malta fever into his own house to be able to keep a closer eye on what was then a little known disease.

However there was no doubt about it, Vienna was declining as a medical centre. The new scientific wind was blowing from Berlin, though when I got there I found that things were by no means so satisfactory as I had thought and hoped. Virchow dominated the world of medical science, and he ruled like a tyrant and dictator His relation to those around him was neither fatherly nor friendly Everyone feared him, many respected him for his very real qualities, but few liked him It is a hard word but if Virchow had died in 1864 after having published his pioneer work on cellular pathology with its guiding motto *Omnis cellula ex cellula*, the whole of medical science would have developed quicker than it did in the strait jacket he kept on it during the rest of his life. At least we should have been able to welcome earlier the return of the highly valuable humoral pathology in its new guise as serology Virchow outlived his usefulness by thirty years. Whoever dared to speak of humoral pathological secretions during Virchow's time was ruthlessly bullied and bludgeoned into silence.

I made his acquaintance about five years before he finally died. On principle he never slept more than four hours nightly, and his appearance confirmed it. He was a frail looking little man with a full grey beard clipped rather short, and he wore an out-size pair of glasses. At his lectures the only way to tell whether he was talking or not was to look at his jaw to see if it was waggling. It was purgatory for anyone trying to hear what he was muttering in his beard. But to watch him make a post mortem dissection was a real delight. His macroscopic and microscopic diagnoses were beyond cavil. But he made one mistake which caused him much mortification. He correctly judged that the piece of vocal cord removed for test purposes from the throat of the German Heir Apparent (who later became Kaiser Friedrich of Germany) by the famous Scottish laryngologist Morrel MacKenzie and submitted to him for examination was healthy tissue. But then in consequence he dismissed the diagnosis of von Gerhardt, who declared the trouble to be cancer of the throat, and supported the diagnosis of Morrel MacKenzie, who denied it. Where Virchow went wrong was in failing to inquire whether the tissue he had examined had been taken from the diseased part of the patient's throat.

Beyond all dispute Kaiser Friedrich actually died from cancer of the throat. Virchow was not even permitted to go near the royal corpse, and the post mortem dissection was carried out by Waldeyer, a professor of normal anatomy who had probably never done a pathological anatomic dissection in his life before.

Under Virchow's unbending influence pathological anatomy was given a dominating position. The anatomist developed, so to speak, into the final arbiter of practical medicine: he expressed no opinion but pronounced a verdict. Unfortunately some medical schools even to-day are under the influence of this baneful idea. If instead of asking the fruitless and uninteresting question, what did a man die of, we asked ourselves the much more important question, how could the man still live with his sickness a minute before death, the answer would comply with the final postulate of medical investigation—of life instead of death.

I hope that I shall not be misunderstood and quoted as treating pathological anatomy with insufficient respect. I

am perfectly well aware of all the developments medicine owes to that valued branch of science it is merely that I am anxious to deny it the excessive importance which has been, and still is sometimes ascribed to it. This attitude was partly responsible for the excessive specialisation which led to topic anatomical organic diagnosis, which in its turn produced the false outlook which caused doctors to treat organs and sicknesses rather than organisms and sick people. It was in opposition to this mentality and its organic diagnosis that after my admission into the Faculty in Berlin more than thirty years ago I introduced (as the first and for many years the only one) a course of lectures on functional diagnosis As a result I won, if not many friends, at least some very loyal ones.

Amongst my teachers in Berlin at the beginning of the century there were a number of prominent and distinguished men. There was the anatomist Waldeyer already mentioned in passing still youthful when his hair was as white as snow and a friend of youth—particularly the female youth. With his white hair and beard he might have stepped from a Tintoretto painting He was the only anatomist I ever knew who seemed able to bring life even into this soulless science. Then there was the surgeon Ernst von Bergmann, 'His Excellency" for he held the highest military medical rank. After Virchow's death he became President of the Medical Association. Tall and broad, with a Roman nose and his hair heavily pomaded and combed straight back from his forehead, his appearance was more imposing than winning His manner seemed calm and extremely objective, though in reality he was neither the one nor the other He was one of the founders of modern aseptic surgery His operative technique and discipline were admirable, and he was one of the very few in his day who dared to operate on the brain Although in private life, which he enjoyed to the full, he was far from a misogynist, he was an anti-feminist on principle and he refused to accept women students on the ground that his scroll of appointment contained the old formula used by King Friedrich Wilhelm when founding the University of Berlin, exhorting the professors to educate the male youth of the country"

There was another Excellency Ernst von Leyden, a clinical

genius and the first man to draw up the classic formula for locomotor ataxy He was a personal friend of the Kaiserin and a man of enormous influence over his patients He really made the lame to walk and the blind to see—particularly in cases of hysteria. But this suave Grand Seigneur did not make the same deep impression on me as his clinical colleague Gerhardt with his fiery red face and *habitus apoplecticus* Gerhardt was a real propædeutic pedant, a fine diagnostician and a therapeutic nihilist. He was a good and encouraging teacher without a great deal of phantasy but tremendously painstaking and exact in his examination of patients. It was certainly through Gerhardt that I was inspired to my minor propædeutic inventions, the solid stethescope, the method of percussion for the apex of the lung and the analysis of various percussion phenomena. The only way in which he acknowledged my somewhat different relation to him was by treating me with even more gruffness than the other students.

And finally there was Salkowsky the father of bio-chemistry another of my teachers It was at this time that he had just discovered the autolytic ferment, a process which led to the auto-dissolution of organs in sterile preservation. This ferment is thus produced by so-called dead organs and it opened up a great deal of discussion as to whether a dead man could really be regarded as dead when even after the death certificate had been duly filled out, his organs could still produce living and active phenomena. For forensic medicine, theology and philosophy the cat was right amongst the pigeons Salkowsky himself was hugely pleased at the stir he had created, for it provided him with the necessary publicity for his new founded science.

Berlin never has had an authentic student atmosphere, and no orthodox student life ever developed there The town was too international, and offered too many counter-attractions of a sophisticatedly urban nature. But the students at the university were industrious and made good use of the opportunities of learning offered them. And in one point at least Berlin had the advantage over Vienna though it sounds strange to-day there was hardly a trace of racial or national hatreds, and this remained refreshingly true—until the arrival of Hitler There were certainly political antagonisms. There was the V.D.S.

(Verein Deutscher Studenten) the Association of German Students, which refused to admit Jews as members, and its libertarian counterpart, the F W V (Freie Wissenschaftliche Vereinigung) the Free Scientific Association. It was only later under Hitler's baleful influence, that it came to fisticuffs between liberal students and nationalistic rowdies. In those early days *Germania docet* was an honoured principle, and the professorial collegium was dotted with distinguished foreign guests. The proud principle obliged its upholders to generous hospitality In fact at the University of Berlin a remarkable liberalism prevailed in the appointment of notabilities, a spirit seen only rarely in other countries.

In this matter I feel strongly that in any future world planning special importance should be attached to a regular exchange of teachers and professors, whereby foreign teachers or professors should not necessarily be appointed because they are better or more famous than those available at home, but merely because they will be different and likely to bring new angles and opinions with them. That is to say the guiding principle should be that of the greatest possible diversity and not competitive. Any nationally coloured educational system suffers from that narrow-minded and foolish vanity which strives always to claim every possible scientific achievement for its own nationals. This spirit is most inimical to really scientific endeavour, and its upholders are usually not above a little trickery to gain their ends. And let it not be thought that this unpleasant stupidity is something specifically German unfortunately it can be met with everywhere. The conscious, or even unconscious, desire to inflate the importance of the scientific accomplishment of one s own compatriots is a problem not to be underestimated. To my good fortune it so happens that my education has been thoroughly international and in consequence I have been rendered immune from this particular kind of nationalistic poison.

At the end of my student forays abroad I always returned heavily laden to Budapest. I would gladly have spent whole terms at foreign universities, adding to my knowledge and experience, but here too a narrow nationalism raised the bar Even the smallest and meanest universities like to pretend that

they alone are competent to teach their charges, and it is always a matter of great difficulty for a student to persuade his own alma mater to give him credit for any part of his studies he may have done elsewhere, though if common sense instead of nationalistic obscurantism or local patriotism were allowed free play any university would be only too glad to see the knowledge of its undergraduates broadened and extended by intercourse with foreign ideas.

I had no time to lose, so as soon as I had ended my course I put forward my name for the *examen rigorosum*. Exactly ten terms after my immatriculation I was awarded the doctoral degree. But even before the final examination I accepted a post as assistant at Dr Brehmer's famous sanatorium for tuberculosis in Goerbersdorf. It was at this time that modern curative methods for tuberculosis were spreading rapidly throughout Europe, and sanatoria on the model of Dr Brehmer's were springing up everywhere. The fear of bacilli and a positive rage for hygiene were sweeping over the world. With all its exaggerations the rage certainly did no harm, for sanitary conditions in the hospitals of those days were shocking. For instance, the Vienna General Hospital would have been condemned by any Government inspector for the keeping of pigs, but it housed hundreds of sick human beings. In the Berlin Charité a far from hygienic W C. was situated in the middle of the wards. In the Salpetrière and the Hôtel Dieu in Paris patients lay on straw sacks in the overfilled wards, and to see fat canal rats scurrying over them was not an unusual sight. I can remember seeing these scurrying beasts when I was watching Dieulafoi using his famous apparatus to tap a pleurisy exudate. At the beginning of the twentieth century the hospital world was rotten ripe for sanitary improvements, and one of the pioneer institutions of the new ideas was the sanatorium of Dr Brehmer the first of its kind.

Brehmer was a botanist and he was also a consumptive. On the advice of the clinical lecturer at Berlin University Schoenlein he went to the foothills of the Himalayas and continued his investigations in the warmer and more favourable climate there. When he returned to Berlin he was cured. His own case interested him in tuberculosis and its treatment and he studied

medicine, taking his degree in 1864 with a dissertation thesis entitled 'Tuberculosis is Curable' The main witness to the correctness of his thesis was Schoenlein, who supported him in every way Brehmer then returned to his Silesian home and opened up his sanatorium in the middle of pine woods at Goerbersdorf. His patients lay out in the open, and they were carefully dieted and systematically exercised, whilst at the same time everything was done to improve their general health. From these primitive beginnings a system of treatment for tuberculosis patients developed which, with minor variations, is in operation and generally recognized down to this day Brehmer was highly successful with his treatment, and soon tubercular patients were coming to him not only from all parts of Germany but from all parts of the world That was, incidentally in the pre bacteriological period Before long Goerbersdorf was overcrowded and one pavilion after the other had to be built. Throughout Brehmer's life Goerbersdorf enjoyed a monopoly and continued to do so for a while even after his death, until the sanatoria movement, if we can call it that, spread rapidly all over the world, first of all in Germany then in Switzerland, and finally farther afield.

By this time, however bacteriological knowledge was wide spread and the new sanatoria were built according to its principles. It seems incredible to-day but it is nevertheless true that it is only within the last forty-odd years that the world in general and the medical profession in particular has realized the importance of sunlight, fresh air and water as prophylactic and curative factors. It took thirty years for instance before Pasteur's discoveries became common knowledge and were put to practical use. From thirty to forty years seems the period of maturity required before a new idea can become firmly established and join the classic fund of human knowledge. That is about the general rate of collective thought. To take an example from the field of art, it is only after the passage of forty years that paintings are removed from the Palais du Luxembourg to the Louvre—if after examination they are considered worthy of that honour There is something symbolic and generally valid in that. In practical affairs the situation is just the same whether it is a question of the steam-engine, the aero-

plane or the zip-fastener inventions have taken a period of at least thirty years before their recognition and practical application became general Dr Brehmer's thesis and the whole science of bacteriology made no quicker progress.

But when I arrived as a very young assistant in Goerbersdorf the place was in many respects already out of date. I remember turning green with envy when I saw Dr Turban's plans for the first sanatorium for tubercular patients in Davos, but it did not spoil my delight and satisfaction at securing an appointment at such a medical sanctuary for it had already become that, as Goerbersdorf. Brehmer himself had been dead some years when I arrived to take my place as the newest and youngest of a dozen assistants. I was met at the station by the then proprietor Wegener with a carriage. When I got in with my one suitcase he asked me helpfully whether he should send a cart down to collect the heavier luggage. I really believe this was the first time in my life that it occurred to me that the creature comforts might demand more for their satisfaction than could be packed away in one small suitcase. Everything I possessed was either on my back or in that case This was the beginning of what might be called my economic life. All I have possessed from that day to this I have earned The lack of material possessions never depressed me, just as in later life a superfluity never elated me. I can honestly say that my life has been spent chasing after more important things than worldly goods, though in my later life I never lacked a sufficiency of them.

My salary at Goerbersdorf was 130 marks monthly with board and lodging It wasn't much even in those days, but the position gave me an opportunity of extending my scientific education at one of the leading centres of curative medicine. Those were the days in which the tubercular bacillus discovered by Robert Koch was making its way in the world and tuberculin treatment was becoming fashionable Koch's tuberculin was bought up by the Hoechster Farbwerke for a million marks, a very large sum in those days. Its possession enabled Koch to divorce his first wife and enter into a new matrimonial venture with a plump, blonde and most attractive young lady from the stage. I have often wondered whether the undoubted counter-attractions of life with this young woman (much

younger than himself) had anything to do with the fact that Koch released his valuable discovery for general use before carefully seeing it through the requisite long period of tests. In any case, that is what he irresponsibly did with the result that his specific very quickly got into the hands of incompetents who used it without discrimination, causing a great deal of avoidable damage.

It was perhaps this unfortunate example which caused Ehrlich to be extra careful, and it was only after years and years of careful experiment and innumerable tests that he finally permitted salvarsan to come on to the market. Perhaps I am wrong in my supposition, but Ehrlich was a happily married man, and whereas Koch's second wife undoubtedly sweetened his life in one respect, in another she was something of a burden, and it is not too much to suppose that the amount of energy he had left for his scientific work was limited. At first Koch had made all his experiments and achieved his greatest discoveries with the sole help of his daughter who had been his assistant even as an adolescent. Her sexless reliability (as far as her father was concerned at least) was the sober counterpart to the erotic romance represented by his second wife.

In accordance with the new spirit at large in the medical world a laboratory expert was appointed chief of the Goerbersdorf Sanatorium instead of a clinical specialist. This was the Geheimer Regierungsrat Julius Petri of the Imperial Board of Health. He had been an army medical man and as such he had been seconded to Koch as his assistant. When I first met him Petri was getting on for sixty. He was an authentic Prussian disciplinarian, the strict and rather vain headmaster type of man I have always abominated. His chief anxiety was to maintain discipline not only amongst his staff but amongst the patients too. On any and every half way suitable occasion he would appear in the full-dress uniform of a Chief Army Doctor and the sash round his protuberant belly always reminded me of the equator round a globe. The man wasn't a doctor at all and over and above that he was falling into premature senility but in his lucid moments one could learn a thing or two from him where bacteriology and laboratory technique were concerned. He had made quite a name for him

self in the scientific world by a minor but brilliant process with which he solved the problem of isolating microscopic individual phenomena from the general convolut of bacteria thus making it possible to produce them in pure culture and study their *conditions* of life He did this by letting a drop of the bacteriological mixture fall into a test tube full of agar medium and after thoroughly mixing the result he poured it into a sterilized glass dish and covered it carefully with another glass dish and then let it solidify at the appropriate temperature Spread out in this fashion each bacillus formed its own colony and could be removed with a platinum instrument into test tubes for reproduction in pure culture. This Petri-dish was the material key to the subsequent tremendous development of bacteriology and the monument to Koch in Berlin depicts him standing with—a Petri-dish in his hand.

My tasks at the sanatorium included everything the older assistants found tiresome or beneath their dignity At six o clock in the morning summer and winter it was my task to supervise the hydropathic procedure which was carried out in a separate annex in the middle of the woods, and after that I was in the laboratory to carry out microscopic, bacteriological and chemical tests of sputum taken from the patients In whatever meantime was available the particular patients entrusted to my care had to be visited and looked after When it was dark the corpses, if any had to be dissected and sometimes embalmed. I had had no training in many of these tasks, and I had to use every spare minute to learn whatever was necessary in order not to expose my ignorance. All of the older assistants proved valuable to me in one way or the other but it was to Petri alone that I owed my bacteriological training One of the things I have to thank him for most of all was the fact that he made me carry out all the more menial tasks attached to a laboratory I had to wash and sterilize the glassware, boil and prepare the culture mediums, and feed keep clean and generally look after the animals we kept for experimental purposes, with the happy result that in later life I was never wholly dependent on my laboratory attendants. I could always do everything myself if need be. And, what was still more important, I could exercise a knowledgable control over even the most menial processes.

No lazy or good for nothing laboratory attendant ever had a chance of pulling the wool over my eyes

And on top of all these multifarious tasks I still had to prepare myself for my final examination, and at Petri's instance I wrote a monograph on the sanatorium treatment of pulmonary tuberculosis. It was more a compilation from Brehmer's writings and a systematic adaptation of his case book experiences than an independent work. It was to be published by Vogel & Kleinbrink, and I already had the galleys in hand for correction when I decided to scrap the whole thing After all there was nothing original in it and it was not even based on my own experience.

The Goerbersdorf period was interrupted by my examination and by the second half of my military service. When I finally returned I found my activity there much less satisfactory particularly after Petri's death, and I decided to found a sanatorium of my own in Hungary A good opportunity seemed to offer itself in a little spa, Rajecz Teplitz, situated in the wonderful central massif of the Upper Tatras. The place is now in Slovakia. Koloman Széll the Hungarian Prime Minister of the day was favourably inclined to my idea and promised me every support. The necessary draft had already been drawn up for presentation to Parliament, and I was already counting my chickens, when a change of Cabinet occurred and blighted my hopes. In all its Habsburg pig-headedness Vienna had stuck in its toes over the question of introducing Hungarian as a language of command in the army with the result that the opposition began a campaign of obstruction which led to the resignation of the Cabinet. My beautiful plan wasn't worth the paper the draft was so carefully written on.

It was a heavy blow for me, and I literally stood, as the French say *vis-à-vis de rien*. Instead of founding my sanatorium in Rajecz Teplitz I was compelled to accept the post of spa doctor there, which happened to be vacant at the time. My ambitious dream of a great medical career seemed at an end, for to become staff doctor in a small primitive little place like Rajecz Teplitz was much like becoming ship's doctor on a third class passenger boat, and it was not at all to my liking The principle of Julius Caesar that to be first in Rajecz (or wherever

it was he had in mind as an alternative) was better than being second in Rome never appealed to me.

But I was lucky My very first season brought me a most striking and unexpected success. The venerated pastor of a near by community had suffered a stroke. Like so many village pastors he had become excessively corpulent as the result of years of good living It was no easy matter to get at the main vein through the layers of fat which covered his reverence s arm. Several older colleagues from neighbouring villages had tried without success when I the young newcomer was permitted to make the attempt. More by luck than judgment I succeeded at once. I opened the vein and the blood flowed in a relieved torrent. And all this trial and error and final success, took place not in some quiet and out-of the-way surgery from which the general public was excluded but in the ground floor front room of the pastor s house, with half the village craning their ecks to see the operation through the open window and eping the other and less fortunately situated half informed by oud vocal comments concerning the fate of their beloved pastor

They were still patriarchal days. When the blood letting had been successful I heard my Slovakian brothers sigh in a chorus of relief which was followed by enthusiastic shouts of *Toje dobre doctor* That s a good doctor My reputation was made. For nine successive summers I went to Rajecz every year and practised there in July and August, and I have never had cause to regret the time I spent there. As a result of my successful work the place grew and became better known and in the end it was able to place itself on a financially sound footing Peasant carts with patients were lined up along the road, though the next town was not very far away

I was quite on my own in Rajecz and there was no colleague I could turn to Book knowledge and speculation alone were not enough I had to act on the spot, and what I hadn t to hand I had to improvise with imagination and love of my profession Only missionaries and doctors in the jungle can know to what straits a man can come in circumstances like that but I felt myself more a doctor than I have ever felt in my life and right at the top of my form. Later on, as Consiliarius, one is, *au fond* little more than an agent of specialists. And another thing, as

doctor in urban surroundings one never comes across such monstrously neglected cases as I sometimes had to deal with in that out-of the way corner of the world. A man is put on his mettle.

The medical treatises I began to publish made me more or less known in the medical world, and Rajecz became better known too The little spa began to attract many interesting guests, some of whom became my life-long friends. Often when I returned at the beginning of the season from nine months spent abroad in research and study my colleagues in the district would come in to listen to my lectures on the progress of medical science. One of my most zealous listeners was a certain Dr Dusan Makowiczky He was an idealistic Slav a man of unusual culture with a fine medical training There was something ethereal about him which made people respect and honour him. He had quite a good practice, but he lived very frugally and always wore a simple Russian blouse. He was filled with a fanatical love for the Slavs, but he did not hate the Hungarians as most other pro-Slavs did. He was the centre of the Pan-Slav movement in the neighbourhood and I have some reason to believe that he was connected with the Secret Service of Czarist Russia, the Ochrana.

Another interesting personality I sometimes met in Rajecz was Thomas Masaryk, who always came to us on his annual propaganda tour His honesty and benevolence and his high intelligence made a deep impression on me. Masaryk loved the Czech people and I believe he was prepared to make any sacrifice in the cause of Pan-Slavism. His political ambitions were more modest in those days than they subsequently became. He wanted to restore the old Kingdom of Bohemia but only in concert with other Slav nations, and particularly Russia. The idea of a Czechoslovakian State had not then been conceived—that was an *ad hoc* product born of the European political constellation after the dissolution of the old Austro-Hungarian monarchy In any case, in the beginning Masaryk's ideas and propaganda were purely Pan-Slav and it was from this general conception that he hoped, rather vaguely to secure liberty for his people from the Austrian yoke. My colleague Dr Dusan Makowiczky was his Slovakian exponent.

I could understand and to a certain extent, sympathize with Makowiczky's aspirations, because Hungary certainly treated its national minorities badly and very stupidly but I could summon up no sort of enthusiasm for his general political ideas. One day when I visited him in Zilina, a town not far away I found him as though transformed. The reason was, as he told me, that he had at last succeeded in saving 10 000 Crowns and he was now in a position to get Tolstoy's Anna Karenina published in Slovakian. He had himself done the translation in his spare time It duly appeared and I believe it was the first literary work of any importance to be published in Slovakian. Not long after this triumph Makowiczky came to me to say good-bye. He had determined to give up his practice and spend the rest of his life with Tolstoy

I heard of him only once after that it was when Tolstoy made his last flight from the world (and in particular from his own family) My friend and colleague Dusan was allowed to go with him. It is very likely that Dusan was the only person present to stand by the lonely apostle of the rights of man in his last difficult hours. Dusan Makowiczky was a fine character with a noble heart and a fine presence. With his gentle blue eyes and his reddish blond beard and hair he emains in my memory as a sort of latter-day Christ.

Another memorable friend I first met in Rajecz and one who meant a lot to me was the actress Marie Jászai. For Hungarians I need only mention her name. For half a century she was the uncrowned queen of Hungary but her fame remained ex clusively Hungarian, though it would have been easy enough for her to have brought the world to her feet. Uncrowned, did I say? At the age of nineteen the golden laurel wreath of the nation was placed on her head in recognition of her great services to art. And as long as she lived her right to wear it as Hungary's supreme artist was never in dispute. Indeed for Hungary Jászai is more than a name she is a conception a symbol of dramatic and æsthetic art embracing the whole scale of the female emotions fascination, charm, grace, and above all the vocal art. Not a note in the whole gamut Jászai did not command from a delightful whisper over vibrant tones to the full-throated clang of the storm.

I shall never forget her performance in Grillparzer's 'Medea.' The passion of Jason is cooling and she determines to win him back. *Jason, ich weiss ein Lied.* And Jason made weak by the first gentle coo moved by the cry of despair and finally more than a little alarmed at the threatening repetition in a higher key is obviously unmanned. I am certain that if he could have had his way he would have flung away his weapons and taken her in his arms there and then—but Grillparzer would have nothing of the sort. In the meantime the audience was growing restless. Entirely out of sympathy with the unfortunate Jason they demonstratively took Jászai's part and roared with mixed anger and enthusiasm.

Yes people took their theatre-going more seriously in those days. The casinos arranged flower fêtes for prima donnas like Marie Jászai Ilka Pálmay Louise Blaha, Boriska Frank and Juliska Kopacsy. We students would gather around the stage door in wet or fine, snow or hail, waiting for our idol to enter her carriage, and then we would unharness the horses and drag home the carriage under a rain of flowers. The Jászai, or as we preferred to call her "uncle Marie" on account of her sonorous voice, was more often honoured in this way than any other actress.

Yes, of course, such marks of esteem pleased her but she attached very little importance to them. 'Publicity" meant nothing to her. She was a great reader and I believe she was truly happiest amongst her books. She spoke English French and German fluently as well as her mother tongue. She had a tremendous thirst for knowledge, and she wrote widely read books and essays, which secured her election to the Academy. Every mortal thing interested her but two awards and mathematics. It was literally impossible for me—and I did my best—to make it perfectly clear to her why she ought to get 94 kreutzer back out of a florin if the fare cost 6 kreutzer. That may sound extreme, but I have always believed that nature gives each of us a certain maximum capacity. Whoever has an excess of one talent suffers lack in another. Those who are blessed with equal capacity in everything are the mediocrities, the average men and women. The one-sidedly blessed are the geniuses. And I have never met a genius who did not suffer

from some defect or the other A good pedigree bull is highly valuable in one particular fashion it will produce good pedigree progeny A genius has never produced a genius. Universality is mediocrity Singularity is genius.

Marie Jászai was more an assimilative genius than a creative one. She took in everything and adapted it to her own individuality Her main strength as an actress was her declamation. I loved declamation it was my special weakness—in both senses of the word—I loved it but I had no talent for it at all Nevertheless it was to a declamation that I owed my first material success in the world of art. At the Liberty Day celebrations I won the school prize of a ducat with my declamation of a poem by Petoefi all about broken chains, citizens of the world republic, and suchlike seditious and awkward matters. Our fat and worthy School Director, Avendano Gabriel Corzan grew more and more purple and seemed on the verge of an apoplectic stroke, but I proceeded undismayed and unfurled the red banner of revolution in a crescendo of vociferous sound that made my stomach muscles ache—but I won the prize. It was the first money I ever earned in my life. Marie Jászai took me in hand and taught me to speak. It was of great value to me in later life when, at times, I had to lecture for hours on end.

The years I spent in Rajecz seem as far away as a dream. I worked during the day without interruption and I could keep it up only because the evening brought rest and relaxation with non medical people. In time the little spa developed into a sort of literary and artistic centre much favoured by actors, artists, musicians, painters, scientists and writers in need of a few weeks rest and spa treatment. An intimate and familiar atmosphere developed. We arranged concerts and dramatic evenings for charitable purposes, and for the building of a chapel to our own plans The first funds we obtained we used for putting our stock of musical instruments in order and buying a harmonium. It took us two years to collect what we needed for the building of the chapel and I only hope that it still looks down peacefully on our disordered world. Every form of church music from the cantata to the oratorio was performed there. My chief musical mentor was Adolf Back, leader of the Boston Symphony Orchestra and later professor at the Vienna

Conservatorium. My favourite piece was a rather melodramatic arrangement of Schubert's "Ave Maria" which was usually performed with moonlight streaming through the chapel windows. Carl Aggházy played the harmonium, and Adolf Back the solo violin whilst the famous opera singer Blanche von Farkas sang the soprano part and Marie Jászai spoke the prayer

Such performances made a much deeper impression on me than any routine professional performance carried out to the accompaniment of printed tickets and numbered seats. The charm of such moments cannot be ordered and arranged. It is no mass phenomenon, but an individual human experience. Those who take part in it do so with heart and soul, unmoved by any business or professional considerations and with no thought to the satisfaction of a paying audience. The singer sings as a bird sings, and not as the music agent hopes. Every public artistic performance has something of prostitution about it, and in this case therefore I can risk without cynicism the comparison with a street walker who sells her attractions, but reserves her heart for some unprofessional love. At such evenings in our little chapel art was truly for art's sake, unburdened by any material thought, and almost without the urge to shine which Adler stresses so much as one of the mainsprings of human action. Such experiences were more than mere concerts, and the memory of them still moves me to-day

The happiest days of my maturer youth were spent in Rajecz, where the magnificent world of nature spread itself out in all its mountainous glory For the first time in my life I consciously enjoyed the fields and the meadows, the deep silence of the pine forests, and in the distance, the mountain peaks rising into the blue sky The harvest filled me with a feeling of thankfulness to the Almighty and the peasant in his fields gave me a deep respect for human labour Without cant I can say that it was here that I received the tonsure as a servant of humanity Everything I experienced in Rajecz was clean and decent. And I fell in love with the world once and for all. And not all the warts on its face have ever made any difference since.

Unforgettable memories crowd in. I can still hear the voice of Jászai on warm summer's evenings as I lay stretched out on the grass in physical well being after many hours spent

crouched over the microscope and she recited sonnets of Shakespeare she had translated. And whilst her marvellous voice formed the eternal words she would perhaps be carefully darning a hole in my sock without taking it off and without pricking me with the needle. Her translations of these sonnets the first in Hungarian, were later published by the Hungarian Academy

And there is one other experience deeply impressed on my memory which I owe to Jászai my meeting with General Arthur Goerges One Sunday she took me with her to see him at Visegrád, a little town beautifully situated at a bend in the river and we started off early in the morning on one of the Danube steamers. The General himself met us at the quay He was almost ninety by that time, but a very tall, slim and upright figure with a head of silver hair and a neat white beard clipped short. He greeted us with great charm and friendliness. A coachman in Hungarian livery sat on the box of his carriage, and we drove back to the simple white house in which he lived and in which he so seldom received visitors. Since the crushing of the Hungarian revolt in 1848 the old gentleman had lived in strictest retirement. At the age of thirty-three he was the commander of the Hungarian revolutionary forces, as Ludwig Kossuth, idolized to this day by all Hungarians, was their political leader

In their tempestuous urge for national liberty the Hungarians were the first of the many races living in the monarchy to rise against Habsburg absolutism. Under Goerges's capable leadership the armed rebels gave the Habsburg armies, still well trained and disciplined from the days of the Napoleonic Wars, a very great deal to do The rebels captured the fortress of Buda and the Danubian town of Komárom, and even threatened Vienna. The Austrian Army alone proved unable to crush the Hungarian rising, and Austria therefore called on Russia for aid. With this the odds against a Hungarian victory became overwhelming, and to save a useless waste of Hungarian blood and preserve the flower of Hungary's youth, Goerges laid down his arms near Isaszeg The impetuous Kossuth branded the act as treachery and the man as a traitor Kaiser Franz Joseph spared the lives of Goerges and a number of other rebel leaders, but on October 6th 1849 thirteen Hungarian leaders were hanged in Arad. The Hungarians have never forgotten

that act of vengefulness, and though Goergei continued to be feared and disliked by the Habsburgers and their supporters as a Hungarian rebel, he was hated by his fellow Hungarian patriots as a traitor

I honoured Goergei both as a national hero and as a humanitarian figure of historical format. We stayed several days in Visegrád and during that time we became such good friends that it was possible for me to touch on matters which it would otherwise have been impossible to raise without impertinence. Goergei's household was that of a simple Hungarian noble, and in his self-imposed isolation he had thought much on Hungary's past and on her future. He strictly opposed Habsburg absolutism and the Germanization of Hungary and was as much as ever in favour of Hungary's independence. He was a man of action and a humanitarian, and his reply to my question as to *why he had never sought to justify his action in laying down arms* at Isaszeg and clear himself from the accusation of treachery was typical of the nobility of the man

"My boy he said, and there was a smile of sadness and resignation on his lips. 'Before the Habsburgs and the world Hungary must not be defeated, but betrayed And therefore it was my duty to bear the odium of having been the traitor

Only a man of real greatness and strength of character is capable of such unselfishness Goergei lived for sixty years after his fateful decision at Isaszeg and in that whole period he never once publicly opened his mouth to defend his honour But in that time, too, passions died down, and without any action on his part Hungarians gradually came to a different judgment on the old man in Visegrád. And when he died in 1907 a whole nation mourned as his coffin was lowered into the grave. The wheel has turned full circle since Isaszeg to-day Goergei's effigy is on Hungary's stamps as a national hero.

CHAPTER IV

STRASSBURG AND BERLIN

As soon as the season in Rajecz ended off I went on my medical travels, having earned enough by dint of very hard work to

keep myself in modest independence during my post-graduate studies and research work. My first stop was Strassburg, which had been torn from France as a result of the 1870-71 war. It was Reichsland, but that did not prevent the Prussians conducting themselves at the expense of the other German States as though it were Prussian territory. In order to make the Reich popular and at the same time annoy the French by effective competition on their own doorstep, a special cult of art and science was developed in the annexed provinces, and the University of Strassburg was honoured with the most brilliant luminaries of the Reich. That was a source of attraction for me, and, in addition, the town was very favourably situated for rapid flight if I found myself bored and disappointed after all in five hours I could be in Paris, and in three in Basle or Heidelberg. Freiburg and Nancy were not far away, whilst the Vosges and the Black Forest were near enough for a week-end trip.

There were many famous men in Strassburg from whom to learn, and I set up my headquarters in the medical clinic of Professor Bernhard Naunyn, who was one of the foremost pupils of Frerichs, the real father of clinical experiment. Almost all the leading clinical specialists of those days were men of Frerich's school, but by that time most of them had passed their zenith and were gradually making way for the next generation, men who were largely their pupils. But Frerichs' spirit still prevailed everywhere, and with much exaggeration but some justice the school was charged with producing specialists for guinea pigs rather than for human ailments. It was in this period that most of the new departures in medicine came about, but they were largely perfected in the laboratory on animals. The biggest mistake these enthusiasts made was to transfer their experimental experiences with animals to human beings altogether too uncritically. The development in this respect went parallel with physiological research, which received its greatest impulse from the work of the Leipzig physiologist Ludwig. After his death almost all the physiological chairs were occupied by his pupils, and right down to the present day the modern German medical school must be traced back either directly or indirectly to three names: Frerichs, Ludwig and Virchow. Of course, this does not mean that the pioneer work

of men like Traube in clinical experiment, or of Johannes Mueller in Berlin, were without influence on the general development, but the fact remains that for my two special fields, physiology and clinical experiment, Frerichs and Ludwig and their successors were decisive.

Frerichs was a daring and imaginative scientist, but not a very admirable or agreeable personality He was an envious man, unwilling to give credit to others. In material matters he was very much alive to his own interests. He had an agreement with the famous banker Bleichroeder according to which he attended without fee to the banker's medical well-being, whilst in return Bleichroeder attended with equal zeal to the doctor's financial advantage. The agreement worked out very favourably for the pair of them Under Frerichs care Bleichroeder lived to a ripe old age, and when Frerichs himself was gathered to his fathers he left a very pretty estate behind him. But his envy of another's well-being went beyond the grave, and in his will he inserted a clause providing that his young widow should lose all benefit from the estate should she marry again. He was not so clever this time, for the merry widow knew a trick worth two of that, and she refused to let it embitter her life—and few of those who knew Frerichs personally felt inclined to blame her

But leaving aside the question of Frerichs personal character we owe him our first real knowledge concerning diseases of the liver He did not hesitate to extend the field of his experiments from the animal world to human beings, but it is only fair to say—and I believe it to be true—that he conducted such experiments only when conditions were such that no harm could result. As far as I am concerned I prefer self-experimentation (and medical history has many heroic examples to offer) to what is usually conducted on an unwilling, or at least a not willing victim who doesn t know exactly what is taking place. English medical history is particularly rich in examples of self experimentation, though perhaps one of the reasons for this is that vivisection is surrounded for sentimental reasons with all sorts of difficulties. Self-experimentation, even when it is undertaken with every possible care and safeguard, and goes well is still a heroic act. For instance, Pettenkofer refused to accept the bacillus theory of the cause of cholera and held to his own

idea of sub-soil water So to put the matter to the test he drank a glass of water infected with virulent cholera germs, and remained sound But Pettenkoffer was obstinate and he defied death successfully Another case had a less satisfactory ending The Viennese clinical specialist Mueller experimented with plague germs and unfortunately they killed him.

Whether experiments on human beings should ever be con ducted is a much-disputed question I believe that as long as medical research continues such experiments will be necessary as the crowning test. I don t want to put too fine a point on it, but the truth is that almost every operative interference is by way of being an experiment, no matter how many times the same thing, or apparently the same thing, has been done before. The general public is inclined, in effect, to accept this stand point by its insistence, and very proper insistence that each patient should be treated as a special case" Experience in operative intervention will always reduce the danger and an ever-careful approach even in accustomed operations will reduce the risk, but in the last resort every operative inter vention will still remain an experiment.

Let us take the comparatively simple and uncomplicated example of the normal operation for appendicitis The first operations were carried out by Sonnenburg a Berlin surgeon, and in the beginning the mortality rate was rather more than 50 per cent. But, and this factor should never be forgotten, each victim contributed to the reduction of the mortality rate in appendicitis operations to the present low level of rather less than 0·5 per cent. Every single operation in those early days was an experiment on a human being, an experiment which served the common cause of humanity Only recently 50 per cent of a certain number of pneumonia cases were treated with a new and, as it proved very effective specific. That too was an experiment on human beings, and a highly successful one, but it is quite clear that the extra mortality rate which showed itself amongst the 50 per cent. not treated with the new methods could have been avoided Personally I consider this sort of demonstration rather exaggerated and unnecessary but I should not like to have to draw the line myself. It would be too difficult to say just where it should be

drawn in order on the one hand to do no harm to patients and, on the other not to hamper the cause of scientific progress. No matter what kind of human development may be in question there will always be some who benefit by it (if it is real progress, then the majority will benefit) and others who suffer

But in this matter there is one thing against which I have always sternly set my face, and that is the tendency to regard poor patients in public clinics as so much experimental material to regard experiments made on them as quasi as of right in return for their keep and the medical attention given them, which, in the normal way they are unable to pay for like their better-situated fellow sufferers. This unfortunately quite widespread form of class distinction is one the new social justice for which we hope must ruthlessly abolish

Frerichs himself was an experimentor on human beings, but his school concentrated on vivisection. In my opinion vivisection is necessary in the cause of medical progress. Making all allowances for due sentiment I feel that if sacrifices must be made in the cause of scientific progress then it is better that they should be animal rather than human sacrifices To place the protection of animals above the protection of human beings is truly fatuous.

Naunyn was an orthodox pupil of Frerichs, and we owe much to him with regard to the pathology of diseases of the liver and the spleen, and the origin of gall stones, but his chief service was perhaps in the investigation of diabetes. It was in his clinic and under his supervision that his assistants, Mehring and Minkowsky, who afterwards both became famous, conducted experiments on dogs whose pancreas had been removed in order to make them diabetic. As a result of these experiments much light was cast not only on the problem of diabetes, but also on the problems of animal metabolism. But, above all, it was due to these famous experiments that insulin, a boon to diabetic mankind, was discovered.

Naunyn was a devoted and enthusiastic scientist, but a poor doctor For him sickness was an experiment by nature. He was keenly interested in sickness, but not in sick people, or only in so far as his diagnosis of their trouble turned out to be right. He was an intuitive diagnostician and a brilliant one. In all

the years I worked at his clinic I cannot remember having been present at a single dissection which did not confirm his diagnosis. Naunyn had no real success as a teacher and his lectures were usually very poorly attended, but for those who worked closely with him he was a fount of ideas and a remarkable inspiration on all fields of medicine. He was capable of much patience with his students, and he always showed great understanding and encouragement for any new idea.

It was at this period that the scientific world was revolutionized by the discovery of radium and polonium, and as a matter of course I was keenly interested in the medical application of this epoch-making discovery. Naunyn found me worthy of sending to Paris as his representative to visit the Curies and find out on the spot the exact state of this newly born branch of science, radio-activity. That was how I came to Paris. My first visit was paid to the father of the newly discovered rays, Becquerel, Professor of Physics at the Sorbonne, who handed me over to one of his assistants for a short course.

Becquerel was one of those cultivated Frenchmen whose politeness and willingness to be of assistance were as evident as the extreme neatness and elegance of their personal appearance. He was a small man with friendly twinkling eyes and a short full beard parted in the centre and brushed to each side so carefully that each hair seemed to be in its appointed place. The crease of his trousers was like a razor and his black morning coat sat on him as though he had been poured into it. His voice was soft and agreeable and he explained everything with great amiability and helpfulness. During his explanation he opened a drawer of his writing-desk and showed me the exact accidental juxtaposition which had led to the discovery of radium. There was the cardboard box with the photographic plates, then the key that lay on top, and then the amorphous lump of pitchblende which photographed the shape of the key on to the undeveloped plate in the box.

The penetrating ray was found. It was the Curies who had the brilliant idea of separating all non-active substances from the pitchblende until nothing remained but the pure radiating medium itself. How simple that sounds! And what superhuman persistence in the face of all difficulties, what subtility of

intelligence, what unshakable conviction and determination were necessary before the final triumphant apotheosis!

Becquerel gave me their address and a letter of introduction—the laboratory was situated in the building of an 'Industrial School' somewhere out in the suburbs—and I set off to find them. I don't quite know what I expected, but I was shocked when I got there. In the courtyard of the school was an erection, more like a shack than a laboratory with small windows and a door which led direct into the interior The place was fairly roomy about 80 × 25 and heated by a primitive iron stove in the middle. There were tables under the windows, and one corner seemed to be full of various apparatus. The flooring was of wood and defective in many places. Altogether the place was a miserable hole and quite unworthy of being such a research laboratory I have heard it suggested that the Curies would probably not have been able to work so brilliantly in a modern laboratory and it is certainly true that very often the saying Grand laboratory poor work poor laboratory grand work, has proved true.

When I entered this ramshackle place a tall rather elderly man with rounded shoulders wearing a laboratory overall turned to me. It was Pierre Curie. I introduced myself with the letter Becquerel had given me and Curie then took me into the far corner of the gloomy laboratory and presented me to a woman of medium height wearing a simple blouse and dark skirt. She had a typically Slav face with rosy cheeks and high cheek-bones, and her hair was parted very simply in the middle. This was Madame Curie. She welcomed me amiably and immediately proceeded to explain everything I wanted to know It was one of the greatest moments of my scientific life when on her electroscope I observed the varied ionization produced by the preparation in different strengths. After that memorable day I visited the laboratory regularly chiefly in order to master the technique of measurement. At that time the interest of even the scientific world in the new discovery seemed not to be very great, and often I was the only visitor Ever since then I have always retained a lively interest in radio-active matter with the result that in 1912 I was able to publish the results of my own work on the physiological and

pathological influences of radio-active substances. Since then my conclusions have not been fundamentally extended or corrected and they still hold good in the case of the atom bomb The influence on blood formation and diseases of the blood which I discovered received some notice at the time and since then I have often been called in both as lecturer and consultant on this field.

However the investigation of radio-activity was only one part of my general plans for my future activity My ideas had received practical confirmation during my work in Goerbersdorf and afterwards in Rajecz. I told myself *that the heroic* specifics of medicine were as old as humanity itself, and that the root of all methods of treatment was to be found in the general fund of popular medical knowledge No matter what brilliant progress may still lie ahead of medical science, this absolute minimum in the treatment of patients will never be dispensable The supporting pillars of the whole medical edifice will always be bleeding purging fasting vomiting and sweating

Let me explain in greater detail. The justification and validity of these five specifics in the treatment of human illness have never been disputed or even doubted by any sensible doctor from the time when Moses received the first written code. But their indiscriminate application is a very different matter and has often caused much harm. Scientific investigation must therefore lay down indications for their application by studying the basis of their effect. With this programme before me it was obvious that I was never going to be embarrassed by lack of any practical problems to study On the other hand it was equally clear that it meant a life's work. A life's work did I say? No, the life's work of many many men, and one calculated to keep them breathless with interest throughout. The first task in the huge complex that I picked out for myself was to study the basis on which bleeding secured its beneficent results.

When I began to look around me for points from which I could start my work all I could find was a few quite inadequate indications concerning the dynamics of the circulation of the blood There w[illegible] *[illegible]factory information concerning cir* [illegible] magni[illegible] the living human organism. New

methods and new ideas proved necessary before a satisfactory approach to the problem could be found. What quantity of blood was there in the living organism? What volume of blood was emptied with each heart beat? What was the speed of its circulation? How long did it take to complete the full cycle? These and many other questions connected with the function and performance of the heart remained to be answered. After seven years of hard work I was at last able to publish my 'Hæmodynamics" The book *was the result of systematic* studies about which I had first begun to ponder in Goerbersdorf, though, of course, such difficult and complicated problems needed very thorough preliminary training and a great deal of specialized research before it was possible to approach them with any hope of success. I was only twenty two in Goerbersdorf, and very conscious that I lacked a really sound scientific clinical training

Apart from Naunyn there were three other professors in Strassburg whose work interested me greatly the pathological anatomist Recklinghausen, the pharmacologist Schmiedeberg, and the bio-chemist Hofmeister The hospitality of the scientific institutions there was beyond reproach, and all the professors proved extremely willing to help me. In addition, student life in Strassburg was interesting and varied, more like Paris than Berlin. Apart from the official façade, the Germanization policy had made very little progress. In their hearts the Alsatians remained French and the Prussians were totally foreign to them. The old habits, customs and celebrations remained untouched. In private life the immigrant German was not only tolerant of the ways of the people amongst whom he had come to live, but he even let himself be willingly assimilated—for a pleasant change, if for no other reason, for what he found there was more attractive than what he was accustomed to. The result was that the Germans enthusiastically joined in the celebrations in the Orangery and in the carnival on the streets in fact the Germans were, if anything, a trifle more enthusiastic than even the local inhabitants. In *the thirty years of their rule the Germans had achieved prac*tically nothing of any fundamental importance the Alsatians remained French and every attempt to Germanize them failed

in face of their determined patriotic, nationalistic and even particularist outlook. Whoever rules this little country in the future will achieve nothing without granting its inhabitants a very considerable degree of autonomy. Even scientific methods remained largely French despite the great personalities Germany had sent as her representatives, but the final result was a very happy alliance of French imagination and German reliability and thoroughness.

It was during this period that clinical science experienced a crisis: it was leaving the sick bed for the laboratory. The keen eye and intuitive feeling of the doctor at the sick bed was to be replaced by the impersonal objectivity of the laboratory. That therapeutic nihilism which had already triumphed in the Vienna school of Oppolzer and Bamberger was being furthered to the utmost by Schmiedeberg and his school. Pharmacological experience gained with human patients was dismissed with contempt: the only really important thing was the outcome of experiments on animals. The result was that the professional pharmacologists deprived the doctor of more medicines than they left him, and the science of pharmacology sank to the level of a very inadequate experimental physiology, a tendency from which it suffers to this day. There is, of course, no doubt that this line of research threw a lot of old and unnecessary ballast overboard, but it also gave us stones instead of bread for a long time, to the great detriment of the art of healing.

Hofmeister's chief service was the systematization of bio-chemistry, and it is more or less on the basis he laid that the science of bio-chemistry still stands to-day.

The anatomist Recklinghausen was a little man with a bluish-red complexion, a short beard, large spectacles—and an ebullient temperament. He was a typical bantam fighting cock and tore into everything that opposed his own ideas, but there is no doubt that he greatly enriched the science of medicine. He destroyed a lot of comfortable old ideas, but he contributed much that was new and valuable. In those intolerant days of bacteriology pure and simple he and the Breslau clinical specialist Ottomar Rosenbach were alone in insisting on the importance of both constitution and disposition in the aetiology of infectious diseases.

The battle concerning the origin of tubercular diseases was at its height, and Recklinghausen took part in it with great glee and vigour He refused to admit bacteria as the cause, and he compared the visible tubercular knots in which here and there a bacillus could be found with the pyramidal cavalry droppings which were to be found everywhere in those days before the final triumph of the internal combustion engine. When the interested observer arrived the horse had gone on, he declared—but the sparrow on the heap was always there. To suppose that the bacillus produced the tubercular knot was as false as to suppose that the sparrow produced the dung *Tubercular disease was not directly caused by a bacillus.* Recklinghausen may not have been right with his earthy arguments, but at least his vigorous opposition did one good thing it effectively breached the solid wall of monomaniac bacteriological thought, and it became rather less than a sacrilege to look to left and right for other factors than bacteriological ones to explain disease. In fact the whole furious discussion did much to bring us to the more liberal standpoint prevalent to-day where the pathology of disposition is concerned.

It was in Strassburg that the basis of my experimental clinical training was laid. My studies there came to an end in a rather surprising fashion. After my "holiday" in Rajecz in 1902 I returned to Strassburg to continue my work with Naunyn as usual when one day he asked me bluntly to tell him quite frankly whether I had ever noticed any signs of approaching senility in him. I was able to reply with a good conscience that I never had. Naunyn was obviously relieved. "You see, János, he said "The last thing in the world I want is to go on too long and cling on like a limpet after my time. I'm going to retire now and no one will be able to say I'm ga-ga. You'd better look round for something else at the end of this term. If you take my advice you'll look for somebody who can appreciate new ideas and be more help to you now than I can. There's a younger man in Graz called Friedrich Kraus. He's just written an article for my journal on 'Fatigue as a Measure of Constitution His standpoint seems likely to open up new avenues for clinical research because he deviates from the usual

topic anatomic idea and places the functional factor in the foreground Go to him; I'll give you the warmest recommendation"

In point of fact Naunyn's decision was not quite so noble and generous as it looked there was an important *arrière pensée* The famous Berlin clinical specialist Karl Gerhardt had just died of a stroke and an appointment to his chair was therefore due. It was Naunyn's dearest wish to work in Berlin, where his father had once been a respected Lord Mayor and he hoped to be short listed. However the short list read Friedrich Mueller (Munich) Ludolf Krehl (Heidelberg) and Friedrich Kraus (Graz) Mueller declined the honour he preferred to stay in Munich. Krehl was not really *persona grata* for what was after all a military institute (the Berlin Charité) because in a delicate domestic affair touching his honour' he had, quite rightly refused to fight a duel. And although Naunyn, a pupil of Frerichs, felt himself greatly superior to either of these younger men both Gerhardt's pupils, he was not considered for the appointment on account of his age he was already sixty-four The Minister therefore had no alternative but to appoint the next suitable candidate on the list, Kraus Kraus was a Sudeten Czech born in Bodenbach in Bohemia. It was altogether a lucky business for me because it meant that I had not to work in the narrow small town atmosphere of Graz, and I went to Kraus in Berlin immediately after his appointment, and remained there for good. No not for good until Hitler came and upset many things.

I was lucky in another respect too I found Kraus a very agreeable man to work under and he remained my friend until his death. I met him first in the gateway of the old Charité. He was wearing a broad brimmed soft hat, and a constant smile and broad cheek-bones combined to turn his eyes into two merry little slits. And on top of that his Bohemian potato nose and long pointed beard gave him the appearance of the dwarfs in suburban gardens. The little man had good humour written all over his face, and there was absolutely nothing pompously professional about him. He was without prejudices and his thought was untrammelled. All that counted for him was performance—coupled with luck if possible. He liked to have

fortunate people around him and he avoided the others as far as he was able. He had been very lucky himself. The son of a poor forester (who, incidentally died of progressive paralysis) he came into the world as a breech birth in the caul. Such children are proverbially lucky He knew poverty in his youth, but as a student he found a powerful protector in Professor Hofmeister who was working in Prague at the time. His own theoretical knowledge was very wide thanks to his own great talent, his marvellous memory and his enormous industry I worked with him for thirty years, and in all that time I never knew him to give a lecture without being thoroughly prepared for it. His knowledge and information were right up to date, and he would have regarded it as a calamity to run up against anyone better informed than he was.

Hofmeister recommended Kraus to Professor Kahler the successor of Jaksch at the Prague University Clinic. Kahler was spreading the lessons of Charcot in Central Europe, and himself enriched the science of neurology with his description of new disease phenomena After a few years in Prague Kahler was called to Vienna to occupy the chair of internal medicine at the University there, and he took Kraus, then his young and talented assistant, with him. After about a year in Vienna unmistakable signs of cancer of the tongue began to show themselves in Kahler and he was compelled to hand his lectures over to Kraus, whose success as a teacher proved phenomenal. He was not thirty at the time, and had he been a little older there is no doubt that he and not Neusser would have been appointed to Kahler's vacant chair He was made Primarius at the Rudolf Hospital instead and later he had to console himself for ten years with a professorship in Graz until at the age of forty-three he was called to Berlin. His career is another example of the great influence the sudden and unexpected decease of the man in front can have on a career His luck held. In that one respect he was a superstitious man he believed in luck. If he forgot anything he was afraid to go back and fetch it. If he accidentally put on his sock inside out he was happy for the day and he never missed an opportunity of touching a sweep's sleeve or a hunchback's shoulder in passing

But that was where his intellectual limitation began and

ended Otherwise he was a man of unusual breadth of intellect. He was not one of those professors who seek to force their assistants into their own mould and crush out any independent ideas. On the contrary he chose his assistants either because they knew more than he did in certain specialized questions, or at the very least, because they had ideas of their own. In this way he insured himself against intellectual stagnation. More than once I have heard him declare that he learnt more from his assistants than they did from him. In some respects he was probably right, but the indisputable fact remains that the solution of every problem was brought about under the fruitful guidance of his general ideas It was his great knowledge and ability on so many and varied fields physiology chemistry physics, bacteriology and microscopy which kept us assistants above water in the rapidly moving stream of scientific progress.

In those days Berlin was becoming something like the great head and centre of scientific progress Every new discovery had to be examined and approved first of all by Berlin. The discoverer invariably came to Berlin in person first and acquainted us with his discovery and heard our opinions before venturing before the public. I must say that this often caused a lot of unnecessary time wasting and it was not always profitable, but at least it meant that we were being bombarded with new scientific knowledge and experience and that we were willy-nilly right up to the minute in our knowledge.

Many new branches of science and new special fields were opened up at the beginning of the twentieth century The introduction of Roentgen rays drastically altered our old diagnostic methods. Serology and immunology brought new opportunities for therapeutics. Bacteriology hygiene and public prophylactic medicine did the same for medical science in general. It was recognized even in those early days that certain harmless bacterial products could be used to prevent the development of pathogenic bacteria, and, for instance, pyocyanase was recommended against strepto and staphyllococci, and it may therefore be considered as the forerunner of penicillin. It was the science of bio-chemistry which really started the great advance which has since been made in the investigation of metabolism.

This same period also saw the birth of chemotherapy which led from methylene blue over salvarsan to the present-day triumph of sulphathiazol preparations. In those days we knew a little about the thyroid and sexual glands, and Brown Sequard and Ernest Starling were still in the future. It was the systematic investigation into the problem of hormones, or endocrinology which raised the veil and gave us our present-day knowledge.

And then there was the new field of study vitamins One can truthfully say that medicine has earned the name of a science during the past forty years For young and eager minds those early days were exciting Whoever had the opportunity of watching the wildly boiling pot was a lucky man, particu larly if he were able to do a little modest cooking on his own account. Perhaps we were too enthusiastic and too hopeful in those days. Since then we have achieved a greater distance and learned to judge things more objectively In this we were much helped from time to time by unexpected hard blows and knocks which took the over-eager edge off our enthusiasm and made us more cautious. We were right close up. It is a notorious fact that all things look different from a distance, whether of time or space.

But I can say that for thirty years I had the great good fortune to live in close contact with pioneers and discoverers. And I was particularly happy to observe that this development was a popular one in the truest sense of the word and aroused the interest of an increasingly large section of the general public. The quest for knowledge was stripped of all mediaeval mysticism and brought out into the light of common-sense day The general public became interested in our problems because our discussions were openly conducted in the full light of criticism, and not jealously hidden behind closed doors. It is quite false and wholly deleterious to attempt to keep the general public in blinkers, and fortunately there is less self-important secrecy amongst scientists to-day than ever before.

Every prominent philosopher physicist and [illegible] has his Boswell to-day and he runs no risk of being publicity hound in consequence. Only miserable envy petty jealousy now stand in the way of popularization. I all the so-called ethical and moral arguments in

drawn blinds, but no advantage of such a policy remotely outweighs the dangers of deliberate mystification. Voltaire has assured us that even the Highest needs publicity—hence he has the church bells rung Science certainly needs publicity and I am very glad to see that the idea of scientific publicity is making great strides in England too and that prominent representatives of science are filled with misgiving at the scant attention the newspapers pay to scientific matters. On the Continent the old inbred fear of consulting a doctor is quite dead amongst the masses of the people they go willingly to the doctor and they follow his advice. In consequence the general health of the people is, other things being equal, much higher than it was and this beneficent result is a by-product of the increasing respect for scientific achievement, whose development the present generations have been privileged to follow freely The names of capable doctors and other scientific men should be publicized every bit as much as those of prominent

1. The general public should know who they have to thank—and why they have to thank him.

Of course, the Berlin Charité was not the only vantage point from which one could follow the rapid development closely In pursuing my own ideas I needed certain special equipment and certain special training for instance in experimental physiology and gas analysis The two most prominent names in this respect were Haldane in England and Zuntz on the Continent. The most convenient for me was Zuntz, who was professor of animal physiology at the Agricultural High School in Berlin. He was a bald-headed little man with an untidy beard and the proverbial large professorial glasses. He was also a man of deep and wide knowledge a very critical master but a just one. His reliability was absolute, and his experimental technique was unequalled His greatest service to scientific inquiry was to have laid the basis for our knowledge of respiratory analysis

and circulation To-day these various fields have become specialized because it seems impossible for one man to master them all. But Zuntz could and did. Despite his importance and the undisputed recognition he had won in the world of science he never ceased to be the Jew of Lessing's day the Wise Nathan (his namesake incidentally) who asked with humility for permission to enter the halls of science.

The institutional equipment of the Agricultural High School was mean and miserable in the extreme, but Zuntz saw to it that everything absolutely necessary was available—or could be improvised. I can t remember any ready-made apparatus in the institute it all had to be worked out and laboriously put together when needed. The animal cages were in the laboratory Dismantled apparatus threatened to fall down on one s head. There were great cracks in the floor full of spilt quick silver, and proper cleaning was impossible. Who would have dared to touch the extremely delicate and brittle instruments? But this wretched place was full of eager scientists from all over the world, and amidst all the chaos most remarkable discoveries were made and most valuable scientific work done. It was much the same with the miserable barn of a place the Curies had to work in. Zuntz was the pride of the Agricultural High School and fortunately the Ministerial official in charge knew his worth and supported him as far as he was able. Whether this was from a feeling of shame that foreign scientists should come and see him working in such deplorable conditions or not I don t know but at long last this permanent official—his name was Thiel—managed to get permission to provide Zuntz with a new laboratory specially built for him with the last word in modern technical apparatus.

I remember how we all trooped into our new scientific abode and looked around. It really was the last word in efficiency no doubt about it, but it wasn t comfortable it wasn t friendly and familiar and it had no atmosphere. It takes some time before you can settle down in circumstances of that sort. Nothing is in its accustomed place. Even the accustomed place isn t there The general routine is disturbed and you get quite nervous and distracted. It was I who broke the inhibiting spell. By a horrible accident. I dropped a bottle of concentrated

sulphuric acid on the highly-polished parquet flooring In a trice the corrosive liquid gnawed its way into the wood not only in the pool where I had dropped the bottle, but all over the place, where it had splashed far and wide. I was paralysed with fright and my heart sank as Zuntz rushed up I prepared to bow humbly to the storm of reproaches. Instead of that dear old Zuntz surveyed the damage, slapped his thigh and beamed with delight.

"Thank God for that he said. "Now we can work in peace without bothering about scratching this or damaging that. Phew, what a relief!

After that we settled down comfortably and the old easy going and so fruitful atmosphere returned. I continued my studies with unflagging enthusiasm until in 1909, after seven years hard, but joyful labour I was able to publish my monograph on hæmodynamics. But that was by no means all I did in that period My clinical work was not neglected. At *7 30 sharp in the morning I was in the Charité, and I stayed* there working until one. From one to three I worked in Professor Heymann's Polyclinic for ear nose and throat diseases. And after that I worked late into the night in the Physiological Laboratory to which I was privileged to possess a night key My meals? Yes, of course, I did eat, but they had to be taken at convenient, which meant very odd, times.

That was a long period of very hard work, but looking back on it I can say that it was one of the most satisfactory and therefore one of the happiest periods of my life. I overworked, it is clear but I was young and my health was perfect, and so the lack of sleep and the irregularity of my meals have long been forgotten whilst the fruits of my labour have remained. It was during this period that I laid the basis of my subsequent reputation in the scientific world, and I had not long to wait for recognition Soon after the appearance of my work on hæmodynamics I was given permission to practise on my own as a doctor in Germany without taking the usual examination. This concession was motivated by a reference to my acknowledged scientific achievements" My deep satisfaction can be imagined. I was then appointed *Privat-Dozent* at the University of Berlin, that is to say as a Lecturer not formally salaried and

on the permanent faculty The years of scientific wandering seemed at an end.

CHAPTER V

THE PRACTICAL YEARS

TO SETTLE DOWN in Berlin made a great change in my life. For one thing it meant the end of Rajecz for me. However my new life was far too busy to give me any time for nostalgic regrets. From the very first day of it I was, without exaggeration, one of the busiest doctors in Berlin. Kraus dominated the consulting practice of Europe, and he was very glad to have someone to whom he could pass on some of his work with confidence. I was treated like a son in his house, and in his absence he left his wife and three daughters in my care in medical and in other matters. But over and above his real liking for me he greatly valued my therapeutic abilities and thought highly of the great practical experience I had obtained in Rajecz, and, further as the result of years of intimate co-operation we were closely attuned in scientific matters It was never necessary for me to explain any new ideas at length to him our fund of knowledge and experience had become so common, and we could take so much for granted, that a word replaced a phrase, and a phrase a whole rigmarole And then we were both strangers in Berlin. He was an Austrian (a Czech if you like) and he had little sympathy with his Prussian environment, but with me, as a Hungarian, he had many points of contact. When he was in my company he could let himself go and laugh and joke hilariously with no respect for the stiff professorial dignity the Prussians expected of a man in his position. We were happier together over a glass of good wine and a Hungarian Salami or a dish of goulash than with all the carefully prepared delicacies of a formal banquet.

He was never ill, and the only thing that ever troubled him was the chronic rheumatism he had contracted in the dank hospital wards in Prague, and which resulted in a certain deformation of his hands. He lived to be seventy-eight and he never bothered in the least about his health. He was the nearest

approach to the purely carnivorous *homo sapiens* I have ever met. He consumed enormous quantities of meat, treated all vegetables with contempt and had an insatiable appetite for the sweet puddings and pastries of his Bohemian homeland. If all the holidays he ever took in his life were added together I don't suppose they would have amounted to more than six months all told. His way of living was almost purely sedentary and he never took any exercise as such at any time. In fact his life was one long gesture of contempt for all the hygienic rules and regulations we doctors lay down for people desirous of extending their lives to the greatest possible span. In the end it was an accident which finished him. He fell down and broke a leg. That laid him on his back for a long time and he developed a decubital abscess. But for that he would have lived even longer than he did. In any case, seventy-eight is not a bad age to reach.

Don't ask me to explain the mystery, and don't seek to obtain the same results with the same methods. Incidentally he was by no means the only one amongst the many famous and long-lived medical men I have known who lived without any consideration for their health. There was the surgeon Bergmann, the anatomist Waldeyer, the physiologist Rubner and the clinical specialist von Noorden. They all disregarded hygienic rules, ate and drank as they pleased, and worked like slaves—no, much harder than slaves. And they all lived to a biblical old age. The human organism can be compared to a machine in this respect: the cog wheels turn and intermesh, there is friction, they wear out in time. But well made wheels of the hardest steel last longer than defective wheels of softer metal. The weaker vessels must be preserved by care and systematic attention. The strong ones stand up to any amount of use, and even misuse, without breaking.

Kraus was a fascinating personality. He was as popular amongst his colleagues as he was with his patients, and his influence both in the Faculty and the Ministry was very great. It was primarily due to his influence that the all-powerful permanent official Althoff put through the rebuilding of the Charité and the Medical Clinic. I was permitted to give advice and offer suggestions in the working out of the plans, and this

regard for the practical experience of men like myself proved most fruitful, and a number of new departures were introduced which proved very valuable later

Since those days of course, my experience has considerably widened and to-day my suggestions would go much farther For one thing, I feel that past experience should persuade us never to build any hospital or other scientific institution to last more than fifty years at the very outside. After that, if not before, it is quite out of date and usable only *faute de mieux* Even at that time we were trying to get away from the traditional depressing and solemn style of hospital architecture. Sickness in itself lowers the spirits, so why on earth the general appearance of a hospital should be such as to aggravate the process I have never been able to see It certainly need not be so. It is not impossible to combine hygiene, cleanliness and medical efficiency with pleasant colours, agreeable surroundings and an atmosphere in which the patients can feel, if not exactly at home' then, at least, not in a dismal depressing institutional sort of place, much like a prison, from which they can feel lucky if they escape alive. There is no reason at all why the façade of a hospital should be a dismal cross between a workhouse and an architecturally degenerate temple. There is no reason in the world why its lines should not be agreeable and prepossessing so that if it is too much to expect that patients should enter with delight, at least they might enter with less fear than they do at present through its forbidding doors. More is done in our day to raise the spirits of the people than in any other why not do just a little for that section of the community which needs it more than any other?

In our ideas about sickness and death we are gradually beginning to turn our backs on the Middle Ages, which, in this respect as in so many others, harshly rejected the serener happier outlook of classic antiquity and burdened the human spirit with a load of fears and horrors. No horribly grimacing skeleton choked the last breath of the dying Greek it was a kiss, a light caress, that took life from his lips. And the hand that held the torch of genius slowly relaxed and fell.

The Greek attitude to life—and death—was a nobler one, but in the Middle Ages it fell with art and letters into dis-

repute and finally, forgetfulness, and its place was taken by an atmosphere of horror and suffering. The tortures of the damned and the sufferings of the martyrs were dwelt on in every detail and with every evidence of lustful delight. St. Lawrence was incomplete without his red-hot grill and St. Sebastian was not right unless shot full of arrows like a porcupine. And oh the lice, the filth and the resultant horrible skin diseases! Our day is again a healthier one. The tide is definitely flowing the other way. We seek not only to reduce human suffering but to deprive death *itself of its horror, its tragedy and even its pathos.* When Socrates took the hemlock he veiled his face. It was an æsthetic demonstration: none should see the pain that contorted his features. An Ibsen character in our own day desired "to die in beauty." And the dying artist Dubedat in Shaw's "The Doctor's Dilemma" insists that his young wife shall wear no mourning for him but put on her prettiest frock. And it is in this spirit that we should reform our hospitals, make them less depressing and gloomy, make them more beautiful and friendly. And let it not be thought that this is merely a question of philosophy and æsthetics: it has its quite severely practical side: it is easier to heal a man whose spirits are high than one whose spirits are depressed.

In the worst case the hospital is the stage before death, in the best it is a haven to which the sufferer puts in for restoration. In either case the general appearance of a hospital need not be more depressing than the thought of death itself. It so often is. Even vinegary old Virchow had a word of comfort and consolation to offer. Over the entrance to his anatomic

It was good that way I hope my future disappointed none of them, though it never entirely satisfied me. When I look back to-day and ask myself in what particular way I did by best work, I think I can say that it was in my direct relationship with my patients Regular contact with the demands of life gave me more pleasure than occupying myself with pure theory which tends to be arid My most fruitful ideas came from the close observation of sick people. When I set to work to follow them up I was not hypocritical enough to pretend that I was driven by an impulse to help suffering humanity I am sure that the primary impulse of a man who sets himself to solve such problems is not altruistic. If he has it in him he just has to solve his problems—just as the poet must write poetry and the musician compose music. It is their destiny If what a man does benefits humanity he can don the moral cloak if he wants to but it is not altogether honest. The scientific investigator is neither an altruist nor a philanthropist. He is driven by something of the same urge which moves the crossword enthusiasts. He is in its grip. And it is quite fatuous to call him "tireless as people so often do. He is not tireless, but the problem that seizes on him is, and it never lets him go until the end his end.

There is nothing more fascinating than to observe the process of life adapting itself to new conditions, fighting to create a new and workable balance. The process of falling ill and the process of getting well are one and the same process only the direction is different. The highest aim of the human or animal organism is to keep itself alive. In this constant struggle it uses its forces only as it must it never uses more strength than the situation demands, and it always holds the greatest possible strength in reserve until the critical moment, and then it mobilizes every ounce of available energy to overcome the crisis and fulfil its ultimate task. To take a practical example in an epileptic fit there is a serious danger to life itself everything seems to be in the grip of a kind of cramp, the circulation fails, there are no reactions, the breath itself is caught—and just when one is beginning to fear that the end is at hand there is a sudden relaxation, the danger has been overcome, and after a short pause the patient is able to get up and go home.

What restored life to him? I have seen many people fall into a faint, but I doubt whether it was my efforts that really brought them round. Without any outside help they would have come round on their own. But here too the doctor can help himself out of the embarrassment with the old tag *post hoc*. This is not the place to write an abstruse dissertation on pathology. I want to be understood by everybody and I should hate to be one of those of whom the Viennese philosopher declared 'Many scientists are right—until they are understood.' My only aim here has been to indicate why I have retained a practice down to the present day without being in any way dependent on it.

CHAPTER VI

SCHAUDINN, WASSERMANN AND EHRLICH

MANY CHANGES HAD taken place in Berlin since I had gone there as an eager young student. The teachers of the Faculty were almost all new men. Leyden was dead, and Wilhelm His was now head of the First Medical Clinic, with Senator in charge of the Third Medical Clinic. The surgeons Ernst von Bergmann and Koenig had gone, and August Bier and Hildebrand were in their places. The physiologist was Engelmann of Holland. Bumm of Basle had been appointed in place of the gynæcologist Olshausen. Adalbert Czerny of Prague was the successor of Heubner for children's diseases, and Virchow's successor in the chair of pathological anatomy was Johannes Orth.

Each of these names is that of a pioneer in the development of modern medicine, and apart from them there were many other men of ability and importance employed in the ordinary urban hospitals and medical institutions. Pioneers of new sciences and new processes were at work outside the university, for instance the hæmatologists Lazarus, Pappenheim and Grawitz. Litten was describing new disease symptoms. Albert Fraenkel was specializing in pulmonary diseases. Working together, Ewald and Boas advanced digestive pathology by introducing test meals. Fuerbringer was a courageous sexual investigator,

Goldscheider and Oppenheim neurologists of importance. Finkelstein and Baginsky were laying the basis of our modern infant-feeding methods. Klemperer's propaedeutic clinic was a highly successful teaching centre. Hirschberg was upholding the great heritage of Graefe in ophthalmics Amongst the surgeons were Fedor Krause, who was the first to operate in cases of epilepsy and neuralgia, Koerte, who made real progress in bone and joint surgery Sonnenburg, who specialized in bowel operations Nitze, the inventor of the cystoscope, Israel, who wrote a fundamental monograph on surgical intervention in kidney diseases and Schleich, who introduced local anaesthesia. These are by no means all the names of importance whose owners were at work in Berlin then and with whom I had the opportunity of associating not only professionally but also socially All in all it was an epoch of rapid new developments, including the building of what was then the biggest and finest hospital in the world, named after Virchow

Many important discoveries were made, some of them epoch making—for instance, the discovery and development of salvarsan by Paul Ehrlich, whose work aroused tremendous interest all over the world At last an effective means had been found of overcoming one of the worst enemies of mankind. But salvarsan was even more than a specific against syphilis it was a general specific against all forms of spirochaetes, and therefore offered a cure for all the diseases caused by this form of bacteria. The triumphs of the new treatment spread over the whole world, and before long, and for the first time in medical history special hospitals for such diseases as trypanosomiasis were being closed down for lack of patients. One would have thought that at such a moment there would not have been a single dissentient voice, but there was—more than one, and some of them were highly influential voices, and their owners sought to prevent the widespread distribution of this new boon to mankind.

An instance of it came to my own notice. In 1911 I was invited to Petersburg for a consultation with Rauchfuss, the famous specialist for children's sicknesses, who was physician to the Czarevitch and in charge of child welfare work in Russia. The fame of Preparation 606 (the number indicates how many forms of the preparation Ehrlich had tried out

before he arrived at the final one) had, of course, already penetrated into Russia, but at that time the preparation had not been released for general use. As I have already indicated Ehrlich was an extremely cautious man and he was very anxious to keep its application under close personal observation and be quite certain that all the precautions he had laid down for its use were strictly complied with so that in the event of any unforeseen complications arising he could control all the relevant factors. It was a long time before he permitted the preparation to be commercialized He did not want to see his work discredited by failures perhaps even by fatal errors due to wrong or careless application by doctors not sufficiently trained in its proper use However the clinic in which I worked had as much of the preparation as we required, and I was therefore in a position to take a few tubes with me to Petersburg much to the surprise and delight of my friend Rauchfuss I demonstrated its application to him, and as a scientist he was naturally keenly interested but he expressed lively misgiving at the idea of using the preparation on a wide scale, owing to the attitude of the Synod of the Orthodox Church, which held that if the punishment imposed by God on an immoral action could be evaded the general effect on public morals would be deplorable.

The Prussian police also had their objections, though from a different angle. They argued that every common prostitute must sooner or later become infected with syphilis, for a year she would do a lot of damage, but after that the danger of her spreading syphilitic infection was comparatively small so that once the acute symptoms had passed the woman was from their standpoint, no longer dangerous, seeing that she was incapable of re-infection but if the new Preparation 606 cured the prostitute as thoroughly as was claimed, then she could become infected again and again and become a permanent danger instead of a temporary one it was therefore much better that syphilitic prostitutes should not be cured It is certainly difficult to please everybody

The development of syphilis research was highly instructive from many viewpoints. There is a theoretical sequence in which the various stages in the mastery of a disease should fall. First the cause of the disease has to be found. When that has

been done all the known facts must be collected in order that a satisfactory diagnosis may be made. And only then can work proceed systematically to find a cure. This system of orthodox scientific research was certainly justified in the case of syphilis. First came Schaudinn, who found the active cause of the disease in the spirochaete. Then Wassermann arrived with a reliable method of diagnosis by means of his famous reaction. And finally Ehrlich crowned the whole process with the discovery of salvarsan the remedy

A second and most interesting feature of this research into syphilis was that not one of the epoch making stages of the process owed its perfection to any medical school or any professional academic teacher Schaudinn, for instance, was not even a professor but a doctor employed by the Imperial Board of Health with the pompous-sounding title of Government Councillor incidentally, a purely formal one. Wassermann was a titular professor but he had no direct connection with the University though he was a member of the Robert Koch Institute for Infectious Diseases Research. And Paul Ehrlich, although he was an assistant at the Berlin Charité with the clinical specialist Karl Gerhardt, never succeeded in securing an appointment at the University though he was a member of an Institute for Experimental Therapy in Frankfort-on-Main. It seems to me that these facts give a valuable indication as to the way we ought to organize our medical training and research work in the future. The medical school should give the ordinary practitioner his general medical knowledge, whilst the university should be reserved for specialized training, and research should be left in the hands of the research institutes proper

A few weeks after an article had appeared in the Berlin Clinical Weekly publicizing the so-called *cytorrhyctes luis* (what monstrous nomenclature medical scientists think it necessary *to invent!*) *as the cause of* syphilitic infection, a fat little man came to see me in the Charité. His comfortable belly was spanned by a thick gold chain, and he wore a paper collar and a made-up tie complete with dickey and looked for all the world like a caricature of a headmaster in a comic paper His rosy fat cheeks shone where they were not covered with an untidy growth of brown hair and his little slit eyes looked

sometimes through, sometimes over, a pair of steel rimmed glasses. He introduced himself (I hardly caught his name, which I had never heard before) and asked me if I would be good enough to arrange an interview for him with my chief, Professor Kraus. Naturally I was not prepared to do anything of the sort without knowing exactly why Kraus was a busy man and would not have thanked me for wasting his time. My visitor then told me that he was anxious to demonstrate his newly discovered syphilitic bacillus. Coming on top of the ridiculous *cäncies lus* this was rather too much and I therefore invited him to give me a demonstration of the culprit first.

He was obviously prepared for some such request, and when I placed my microscope at his disposal he immediately drew a prepared slide from his pocket, poured Chinese ink over it, and placed it in the microscope, which he then proceeded to reinforce with a special lens of unusual magnifying power (objective 11) which he also drew out of his capacious pocket. With such simple means he demonstrated the existence of the spirochætes beyond reasonable doubt, and all within the space of a few minutes The plate was smeared with secretion from a syphilitic, and thanks to differentiation with the ink he was able to demonstrate the presence of the spirochætes. Thousands of investigators must have examined syphilitic tissue and its secretions under the microscope, but not one of them got the idea of examining the microscopic picture with an unusually strong magnifying lens such as his objective 11 It was this extremely simple expedient which led to the discovery of the cause of syphilis.

The demonstration was so convincing that without more ado I called in Kraus, who entirely shared my view and persuaded Schaudinn (that was his name) to give a demonstration before the Berlin Medical Association and publish his results. The meetings of the Association took place on Wednesday evenings and they were usually very well attended first of all because it really was a centre for keeping in touch with the progress of modern medical science, and secondly because the lectures gave every doctor an alibi with which he could escape at least once a week from the chains of domestic felicity—or otherwise. Wednesday evening was known as 'Medical Night" in all the

local dance bars and cabarets—and in one or two still less reputable establishments. If the programme of the evening was not very attractive the lecture hall would soon begin to empty itself as the assembled medical men dispersed in search of something more amusing The announcement of yet another demonstration of the syphilis bacillus aroused no enthusiasm and little interest. It was definitely not a gala night'

Schaudinn was quite unmoved by the occasion, and he demonstrated his little monsters, the cause of so much human suffering as objectively as he had done to us, and without any learned patter or paraphernalia. The demonstration table was a large one and as many microscopes as possible had been set up each with its smeared plate of spirochætes so that everyone present could see them for himself The demonstration was just as convincing, but it must be remembered that there had been so many disappointments that medical men were highly sceptical Only one speaker a biologist named Kurt Thesing rose in the discussion. He dismissed the whole discovery as a mare's nest and declared that what could be seen under the microscope was not a new form of bacteriological life but merely artificial by-products due to the colouring of the preparation. As the general feeling of the audience was sceptical they were only too pleased to accept this explanation of the phenomenon, and there was a burst of ironical laughter at the expense of the lecturer and a rattle of applause for Thesing Ernst von Bergman was in the chair and he was unable to resist the temptation to exercise a little cheap wit and curry applause from the audience. I herewith close the meeting until the discovery of the hundred and first cause of syphilis, he declared. He got his applause. The audience (those of them who were not already well on the way to other amusements) pressed forward to congratulate Thesing and shake his hand demonstratively

I felt sorry for Schaudinn, and I went over to him to console him for his lack of success. He seemed quite undisturbed by the fiasco and was very calmly and efficiently packing up his things. He smiled. He really was unmoved he even seemed rather sorry for the others.

"Even the biggest donkey will have to believe it before long" he declared drily

He was right, of course, and it was only a matter of weeks before the offices of the Imperial Board of Health became a Mecca for bacteriologists and syphilis research workers from all over the world, and the *spirochaeta pallida* received the deserved additional appellation of Schaudinn. Syphilis research had entered on a new phase And Theing no doubt felt very sorry for himself

Popular interest in syphilis research had been aroused only a short while before this by a tragi-comic happening whose victim was the Breslau dermatologist Professor Neisser the well known discoverer of the gonococcus He was a wealthy man and he decided to organize a scientific expedition to the Dutch East Indies to carry out mass experiments on apes, as the cost of such an expedition was likely to be less than the cost of bringing a sufficient number of apes from the East Indies to his research institute in Breslau They were classic experiments in which the infection was carefully studied in every possible stage, and equally careful studies were made with regard to organic affinities. When the work of the expedition was at an end Neisser returned with his staff to Germany His nephew a well known brain pathologist of the same name, arranged for him to deliver a preliminary report on the results of his labours before the Medical Association in Stettin.

Unfortunately the proposed lecture was seized upon by all the societies for the protection of animals in Germany (of which there were many) Their main activists, if I may use the modern word were chiefly determined old women of both sexes They seem to have taken a tactical leaf out of the suffragette book, for when the time arrived for the lecture the hall was packed with them armed with umbrellas and as it transpired, rotten eggs. No sooner did Neisser appear on the platform to deliver his lecture than pandemonium broke loose. A rain of eggs and other disagreeable missiles descended on the unfortunate Neisser and when their ammunition was exhausted the audience seized on everything not nailed down and made a concerted move towards the platform, compelling Neisser to fly for his life. The protest movement swept all over Germany and meetings and demonstrations took place everywhere. If human beings contracted such horrible diseases as a result of

their immorality that was their own fault, but for wicked scientists to go around infecting poor dumb animals, that was too much. I don t know what use was ever made of Nesser's results, but he never announced them openly and the animal friends remained triumphant victors on the field.

Before the present building of the German Medical Association was erected (I say 'present' but perhaps it is now so much rubble) the Association for Internal Medicine used to meet in the House of the Architects in the Wilhelmstrasse. It was here that August von Wassermann delivered a lecture in which he declared that the so-called complementary reaction put forward by its discoverers, Bordet and Gengou as a method for the diagnosis of typhus could also be used for the diagnosis of tuberculosis Wassermann was the son of a rich Bamberg banker and he carried on his researches as a hobby at any rate it was not necessary for him to earn a living He was only theoretically connected with medical science, and his practical knowledge and experience were both very sketchy However he had a place in the Robert Koch Institute for Infectious Diseases. He was an undersized hunchback, and like all such unfortunates in my experience he was very vain and suspicious by nature He was always dressed with extreme elegance, and it was very obvious from his attitude that he was doing his best to conceal his physical defect. Another compensation, I suppose was the fierce moustache, intended perhaps to give him a martial appearance He had an intelligent, expressive face a fine high forehead and alert eyes, and it was easy to see even from his appearance that he was a man of unusual capacity When it came to his intellect there was no nonsense and no false show His thought was untrammelled by prejudices and he had the courage to express his conclusions openly whatever they were. He had no false scientific inhibitions this was perhaps due to the fact that his scientific pack was not burdensome, and, in addition, he had to an intense degree something which in medical research is often more than formal knowledge a nose and a flair He felt intuitively what results were important, and he would concentrate on them with unremitting energy He recognized the discovery of Bordet and Gengou as highly important not only theoretically (which interested him less)

but, above all practically He was frank and uncomplicated enough to be able to recognize the limits of his own scientific knowledge, and he therefore surrounded himself with knowledgable and well trained scientific coolies as they are dubbed. These are the solid reliable men of no importance on *their own* the little stars who shine only in the reflected light of some other and brighter star In this case it was August von Wassermann

He was an accomplished speaker He never read from a manuscript and he strolled easily up and down the platform, his thumbs stuck comfortably into the armholes of his waistcoat. He spoke slowly and with emphasis and with such confidence that he gave his audience the feeling that they were listening to a brilliant improvisation, that they were accidentally present at an inspired hour Thus the lecture he gave on the complementary reaction of Bordet and Gengou was rhetorically speaking a great success, but within a month the discussion which followed his contention that the complementary reaction was valuable as a method of diagnosing tuberculosis in its early stages completely disproved everything he had said.

He had not been lightly handled in the discussion, and a further lecture in which he proposed to sum up the views of his critics was awaited with considerable interest. With a broad smile on his face he walked up and down the platform in his usual easy-going fashion and dealt with his critics one by one. He admitted at once, without any attempt at evasion, that they were right, and he thanked them for the pains they had taken to check his statements and to show that the complementary reaction was not, in fact, suitable as a method of diagnosis for tuberculosis In the meantime he had also come to the same conclusion. So far the lecture was very tame and his audience was undoubtedly disappointed They had expected fireworks. But, he declared stopping in his path and turning towards his audience with raised finger—the complementary reaction was of superlative value as a method of diagnosis for syphilis, and was one hundred per cent. successful even in the oldest cases.

This was not fireworks, but an explosion However his audience had been once bitten and now his statement was re-

ceived with scepticism, and the end of his lecture rewarded with applause which was distinctly lukewarm. However everybody in the least way connected with syphilis research dashed off to his laboratory to test the truth or otherwise of Wassermann's statement. My friend Julius Citron carried out his tests on the grand scale, and his results left no shadow of doubt Wasserman was right this time, and a pilgrimage set in from all parts of the world to the Robert Koch Institute To-day the W/R, or Wasserman Reaction, is a household word in every clinic in the world. Wassermann was loaded with all the honours the heart of a scientist can aspire to except two which he very much wanted, but which eluded him to the end and provided the inevitable drop of bitterness in the cup—he never received a professorship at a university and the Nobel Prize was not bestowed on him.

If there is one lesson more than another to be learned from the life and work of Paul Ehrlich I believe it is that a man, even the greatest genius, can pursue only one idea to its logical apotheosis. It often looks, I admit, as though a number of different new ideas have each offered inspiration but on closer examination the apparently disparate ideas are reduced to the one basic idea. I have held this theory for a long time, and one day whilst Ehrlich and I were out walking together in Homberg I asked him what he considered to be the guiding idea of his scientific life. He told me that when he was about twenty he had been kept waiting for a while in his uncle's laboratory His uncle was the well known histologist Weigert. To while away the time he had looked idly through Weigert's microscope which stood ready with a prepared slide coloured in blue and red At that time Ehrlich had no histological knowledge at all and the only thing which struck him was that some parts of the cells were coloured red and the others blue. However he realized at once that certain parts of a cell had an affinity with the acid red dyestuff whilst other parts of the same cell had a natural affinity with the basal blue and were therefore able to assimilate those colours Thus various parts of the same cell could be differentiated by different dyestuffs.

From this simple observation Ehrlich drew far-reaching conclusions which he considered and then later summarized in his

dissertation on 'Organic Oxygen Requirements' The logical pursuit of this idea of affinity led him first of all to the foundation of a new branch of science relating to diseases of the blood. The blood cells were classified according to their colour affinities, and in special diseases such as anæmias and leucæmias there were characteristic changes. In this way a new pathology arose.

It was the same affinity idea which proved the key to serological research and immunity and led finally to chemotherapy, whose first link was salvarsan and whose last, but not necessarily final link is represented to-day by the sulphonilamides. Thus the constant pursuit of affinities is the red thread which goes through all the investigations of Ehrlich, and it remains the ever-valid guide which he has left to scientific posterity Further it must be borne in mind that this idea is still in its preliminary stages when chemo-therapy has grown out of its infancy we shall be able to recognize Ehrlich's greatness in its full stature. His first scientific children were promising enough there was methyl blue for neuralgia, arsenic for syphilis and disinfecting dyes like tripaflavin. And already the grandchildren are with us the sulphonilamides, which have already proved themselves to be amongst the most powerful allies of mankind against infectious sicknesses caused by bacteria such as the pneumococci streptococci and gonococci. In 1909 Hoerlein mixed sulphonilamide with azo dyestuff to give it increased milling and washing durability but it was not until 1935 that Domag working on the basis of Ehrlich's principle of affinity attempted to use sulphonilamide for medical purposes.

Paul Ehrlich was a theoretician, and with all his warm humanity he had no talent as a practitioner He never developed a bedside manner and he never succeeded in winning the real confidence of his patients He received his medical training in the Gerhardt Clinic of the Berlin Charité but he never went through with it, and finally he abandoned Berlin and his clinical career altogether and after working for a while in a small laboratory in Steglitz, a suburb of Berlin, he retired to Frankfort-on-Main, where he devoted himself entirely to research work. When I joined the Charité after Gerhardt's death they allotted me Ehrlich's clinical laboratory for my

experiments. It was more of a corridor than a room, about 7' × 33 inadequately lighted by one window This gloomy hole was known, on account of its shape, as the intercostal space, and it was here that Ehrlich made his first basic experiments. When I took over there were hundreds and hundreds of bottles, with dyestuffs still in them littered all over the place. They had to be cleared out and got rid of before there was any room for me and my labours. In Frankfort, thanks to the munificence of the chemical industry and in particular Cassella & Co a firm founded by my wife's family Gans, Ehrlich was installed in the so-called Speierhaus, where unlimited means were placed at his disposal.

He had a truly childlike nature, and the more famous he became the more modest he showed himself. He was a loving husband and father and, later on an absolutely doting grandfather His greatest pleasures in life were good food, a good cigar a never-ending series of thrillers and the telling or listening to broad stories. He loved his family and was fond of his friends, but formal social obligations were anathema to him. He was an understanding superior and a good colleague, engaging in manner willingly communicative and without mistrust. But he had one habit which some colleagues found disagreeable if he gave any of his pupils or assistants instructions he would write them down in a sort of ledger interleaved with carbon paper The recipient would have to sign and carry off the written instructions, and the copy remained in Ehrlich's book. I know quite well that this was not done because he mistrusted those who worked with him it was due to his extreme regard for system and order

His thought was primarily visual. He saw a molecule before him in the room and he would push its elements around like figures on a chess-board. There was nothing pompous about him either in appearance or manner I can see him now a fragile little man with a short reddish beard, peering over the top of his glasses, his eyebrows up in a constant arch and a dead cigar stump in the corner of his mouth, waggling violently as he enunciated words of wisdom in a thoroughly casual fashion as though they were mere pleasant chatter to pass the time. His was one of those simple but fortunate natures which never

it developed beyond all dispute into a real world centre. Parallel with and as a result of this development Berlin also became a world centre of medicine—no *the* world centre of medicine. Medical men came from all parts of the world to Berlin to refresh their knowledge and acquaint themselves with the latest developments on the field of medical science. And not only doctors came, but patients too and something like a health (or if you like, a sickness) industry arose, which brought in according to official statistics, approximately seventy million marks a year All the leading medical men were beneficiaries of this phenomenon, and it went on vigorously until the first world war brought it to a temporary end But it was only temporary, and Berlin's fame as a medical centre was quickly re-established after the war and the old industry was soon as flourishing as ever Berlin retained its medical reputation until the arrival of the Nazis who rapidly destroyed the fine credit of German science. This time a very heavy perhaps a fatal blow has been struck. Its sinister results affect not only the present but the future, because since 1932 there has been an alarming decline in both teaching and research.

The numerically largest contingent of our patients came from Russia. The Russians have always been prepared to make great sacrifices and take tremendous pains in order to keep their health and strength. They are by nature true lovers of life, and they worship both Venus and Bacchus, but without health and strength neither can be worshipped as seems fit to their devotees. Apart perhaps from Jews and Hindus, the Russians set more value on their health and physical well being than any other race Religious promises of happiness hereafter seem to hold little attraction for any of these three races They are all profoundly realistic. They prefer to enjoy their lives in this wicked world just as long and as intensely as ever they can, and I for one don't blame them.

One example of the lengths to which they are prepared to go occurs to me from my own experience. A highly placed and very wealthy Russian arrived in Berlin for a consultation concerning his health. Such people don't do things by halves, and on the very first evening he invited me out to dinner Unfortunately a young and obviously inexperienced wine waiter

handled the expensive Bordeaux so clumsily that he shook up the sediment. My Russian host was furious, but I succeeded in calming him by pointing out that the content of organically compounded iron in the sediment would undoubtedly be good for his anaemia. When I called to visit him a few days later I found a powerful battery of empty bordeaux bottles stacked up in the ante-chamber of his suite, and in reply to my astonished question as to what he had done with all that wine he declared that there was no cause for alarm, he had only drunk just the sediment of each bottle for his anaemia.

I was very anxious not to lose contact with either research work or teaching I knew how easy it was for a medical practitioner to let himself be swallowed up entirely by his practice, and I therefore arranged my day so that the morning up to two o clock was taken up with the hospital and the clinic, and a few hours in the afternoon by my practice. The evening hours were then devoted to work requiring peace and quiet, such as the writing of monographs, the checking of experiments, and general literary studies That sounds a tremendously busy life, and the reader might get the impression that I spent my time dashing from one thing to the other in a round of haste and bustle, but such was by no means the case. On the contrary I found plenty of time in which to devote myself to non professional interests and, in general, to enjoy life. In my experience those people who never do anything but work, and never have any time for anything else, are the people who achieve least. I like a man who finds time for everything, and never rushes around with his tongue hanging out, complaining that he s overburdened with work—they're the really capable ones. They plan their time rationally and in consequence their lives are a harmonious whole. I have never known a genius who was one of the other sort, but I have known quite a lot of inferior characters who were. The really great men I have known always had time probably because they never wasted it. The ever hurrying ones never had proper time for anything They lived their lives according to a scrappy schedule, perhaps, but never according to a well-founded programme.

CHAPTER VII

WORLD WAR NUMBER ONE

IMPERIAL GERMANY HAD long been preparing for war, and when it finally came she was not taken by surprise. Perhaps out of a feeling of delicacy her statesmen had done a little cooking of the national accounts so that the real sums spent on armaments did not appear in the Budgets. However the general military levy which was raised in 1913 could not be concealed Each propertied citizen had to sacrifice one thousandth part of his fortune to the appetite of Moloch, though it was not done without indignant protest. Like most other nationalists, he preferred his glory on the cheap In the spring of 1914 it became evident that certain modernization measures had been carried out in the German Army and the first companies in field grey began to appear on the streets a circumstance which gave rise to a deal of excited comment. Yes, they were prepared as well as they were able, but their ideas were not always of the brightest as the following experience will show

In 1914, before the war I was consulted by Mauser who was already famous as an inventor and upon whom all sorts of honorary titles and decorations had been bestowed. He was a truly modest and God fearing man. I have often known staunch Catholics of this type. Not only did he never miss Mass on Sunday but he attended every day He was born in Oberndorf in Wurtemberg and he still lived there in a large villa—a little castle, in fact—outside the town in which his arms works was situated There he led a life of hard work, social isolation and religious devotion There is something paradoxical about so many inventors of murderous weapons Schwarz, the man who invented gunpowder was a monk. Krupp was a real sentimentalist. The Swede Nobel used the money he gained by making dynamite for all sorts of benevolent causes, including the furtherance of world peace. It has also been reliably reported concerning the famous Italian bandit Rinaldo Rinaldini that before setting out on his innumerable forays when he did not stop at murder he invariably prayed fervently to the Blessed Virgin for the success of the undertaking

Mauser had a divided full beard which came to two points

like the more famous one of Admiral von Tirpitz, but unlike von Tirpitz he was a smallish man. He had lost one eye in an explosion, and it was now replaced by a glass one. He was in love with his work and his inventions. One day he brought me a triple-barrelled gun, one barrel for bullets and the other two for shot, and a revolver They were the latest products of his inventive genius. He had come to make me a present of them before submitting them to the Reich's Firearms Commission

In May of the same year he came to me again this time with a leather case lined with emerald-green plush and containing hundreds of metal bits and pieces whose purpose was a mystery to me. In bitter disappointment he told me the sad story This was his new quick fire repeating rifle. A Parliamentary commission reinforced by the highest military experts had just tested it at the Military Range at Halensee and pronounced it in glowing terms to be the very last word in infantry armaments, only to reject it on the ground that its introduction would tempt infantrymen to waste ammunition Whilst he was telling me this he took the magazine out of the case. This was apparently the soul of the thing and it represented a magnificent piece of engineering workmanship He stroked it as though it were a child, and the tears rolled down his cheeks into his beard—from the glass eye too

Three months later the first world war broke out, and, as everyone knows, the machine-gun became queen of the battle. Bureaucratic experts have so often been wrong, it is as well to take their advice with considerable reserve—and a pinch of common sense if available, for stupidity is an ever-present attribute of men and experts are not immune

The shots in Serajevo laid more than the Habsburg Heir Apparent low One Sunday evening when I came out of the Friedrichstrasse Station on my return from a trip to the Spreewald I found the pavements littered with copies of an extra edition announcing the assassinations. And what a wave of righteous indignation there was! Not only was it the murderers, but against the whole Serbian people, and the general feeling was enthusiastically in favour of war against the 'Balkan bandits and murderers' The propaganda machine had done its work well. Warning voices were raised

moderation, but the militarists and war-mongers redoubled their efforts and shrieked in tones of the greatest moral indignation for the punishment of the criminals.

Four weeks later war broke out. At the time I was suffering from—of all things!—whooping cough and when an attack seized me I had practically to hang on to the nearest lamp-post until the paroxysm had passed. Wildly excited mobs paraded up and down Unter den Linden cheering and howling I saw the Kaiser make his historic appearance on the balcony of the Palace, and heard him declare that from that moment on he knew no parties only Germans And in answer to him the enormous crowds in the Palace Square roared their enthusiastic approval without distinction of class or party

But there were still people who were better advised, and even when the war had begun and the first victory messages began to come in to fan the lunatic flame still higher they were not deceived and clearly foretold the tragic end of the adventure, lamenting the prevailing megalomania bitterly Amongst them were Ottmar Strauss the iron and coal magnate the bankers Leopold Koppel and Carl Fuerstenberg and the head of the Hamburg America Line, Albert Ballin. Such people were profoundly depressed at the fatal actions of the weak Bethmann Hollweg Government egged on by sinister influences in the background

Naturally the war upset everything Individual considerations were brushed to one side The declaration of war had whipped up the lowest and most murderous instincts of humanity Germany of course, was innocent of all blame. "We are surrounded by a world of enemies "We have taken up arms in self-defence And few so very few bothered to inquire whether the wild slogans were true or not. Irrational instincts won the day not reason, and the human cattle careered enthusiastically into the slaughter house.

As a Hungarian I was liable for duty with the Austro-Hungarian Army but the German military authorities asked for my seconding to them and it was granted so that I spent the whole of the war in German military service. At first I was attached to the Town Kommandatur in an advisory capacity and I stayed in Berlin, chiefly to treat superior officers returning

from the front. I was not satisfied with that, however and I asked to be allowed to go to the front. An opportunity quickly arose thanks to the good offices of my friend Erik Woellwarth, who was at that time Chief of Staff to the Army of von Falkenhayn. I went out with him, and soon experienced war not only from the medical but also from the military operational viewpoint. It was a new world for me, full of deeply impressive experiences, and despite its horrors I would not willingly have missed it.

Let it not be thought that this is any claim to the possession of a heroic nature. Far from it by preference I am a bookworm and not given to any sort of brawling The only courage I ever consciously exercised was just as much as it took to fight the ordinary battles of life with dignity Demonstrative heroism I gladly left to those less intellectual souls who, apparently conscious of inferiority seem to need some such proof of their right to exist. Nevertheless I did win the Iron Cross for "Gallantry in Face of the Enemy' And they were *not* brought up with the rations, as some people in this country seem to think.

My act of heroism consisted in keeping my head when others were inclined to panic, and bringing a whole Field Hospital to safety along a little used track through the marshes when we were outflanked on both sides by advancing Russian columns, and without losing a single patient. To me it was a job of work which fell to my lot. It was my responsibility and I certainly didn t want to set a bad example. If that is what they call heroism, all right.

I got other medals naturally—all those that came as a matter of course to my rank and position. They proved useful subsequently in the nursery When one or the other of my children behaved rather too 'heroically" I pinned on a medal. It calmed down the dismayed youngster wonderfully We didn t much care for heroism in our household.

During my military career I was attached to various armies in the field, and in this way I went through the Brussilow offensive, the advance through Serbia, the reduction of Roumania, and the Battle of the Aisne. All in all my militaristic requirements were thoroughly catered for In short, I had a bellyfull.

Opinions about war are divided. I imagine that I am in an unpopular minority at the moment I doubt whether the world will ever know permanent peace Apart from all questions of politics there are deep biological reasons for war I think it must be quite clear to my readers already that I am far from being a bloodthirsty man. On the contrary I am inclined to be sentimental individual tragedies can move me to tears. And I have certainly seen the sufferings involved in war at first hand But I am also a scientist, and I believe in the validity of biological and mass psychological laws more than I do in the utopian and theoretical constructions of the apostles of pacifism. War is an adequate reaction to given conditions As long as there are oppressors and oppressed haves and have nots, privileged and under privileged, the potential clashes latent in these antagonisms will seek to resolve themselves—and the resolution is likely to be violent.

And there is another angle, even to war the results of war are not wholly bad. War is also an impulse to progress. It is a kind of mass review and revision of all the mechanical and industrial products of mankind War also brings about a more uniform and juster distribution of the world s wealth. The mass movements which take place in war and the enrolment of women in war service, work radically against any threatening degeneration by inbreeding The social and biological effects of war are very favourable

As long as human nature remains what it is (and that will be a very long time) nations will not surrender what they hold at the behest of any peace conferences, but will fight to retain it to the last moment, and will give way if they give way only to still greater strength than their own. Do the post war happenings in the world suggest that I am so very wrong in my belief?

The conceptions static and dynamic" will operate alternately in human relations as they do in biophysics. Our problem is not to create eternal peace but to ensure as long a pause as possible for reconstruction. The axiom *Polemos pater panton* is still true to day and the arms of Oxford still bear the inscription *Fortis est Justitia*

As I have pointed out, the enthusiasm at the beginning of the

war was tremendous, but after the Battle of the Marne it declined, despite what I can only describe as a negative masterpiece of propaganda on the part of the German Supreme Command, which succeeded in concealing this decisive defeat not only from the general public but even from the army itself It was 1917 before the common people of Germany began to have any real idea of what had happened in 1914. Lies, propaganda and the concealment of the truth were the chief weapons of the nationalistic elements. Both Socialists and Catholics opposed them, at first covertly and then more and more openly By 1917 the hopelessness of Germany's military situation was already known to many people and it was frankly discussed in parliamentary commission. By that time there was a very definite political opposition to the further prosecution of the war and its most courageous figure was my very good friend Matthias Erzberger

Erzberger was the son of a village postman in Wurtemberg, and he had been an elementary school teacher His general outlook was Catholic and proletarian. He had an unusually sound intuitive feeling for politics, and in his unspoiled peasant dialect he could express good, sound common-sense truths in a way which made them understandable to everybody And because he was himself convinced, he convinced others too. He was a relentless worker and from thought to action was one quick step for him. He was short-sighted fair haired and clean-shaven, and his rather chubby face of an unhealthy bluish-red tinge looked as though it were constantly on the verge of a little grin A plump body would have fitted that chubby face better but in fact he was distinctly thin and frail with bony legs. He was a member of parliament at the age of twenty-five and it was not long before he had become the undisputed leader of the left wing of his party the Catholic Centre.

The Centre Party was even more heterogeneous in composition than other political parties. It was like a little parliament on its own in which all social tendencies were represented from the extreme Right to the Libertarian Left. These disparate elements were held together by one common aim to further the interests of political and religious Catholicism and, if possible, to secure it hegemony in the Reich. The chief voting

strength of the party lay in Bavaria, Baden, Wurtemberg the Rhineland, Westphalia, Hannover and parts of Silesia. Like the hierarchy of the Catholic Church the social structure of the Centre Party was democratic the meek, or not so meek, and lowly greatly outnumbered the feudal aristocrats The party policy was laid down by the clergy During the twenty five years which preceded Hitler's coming to power the most influential man behind the Centre Party was the Jesuit Father Rauterkus, a clever and cautious politician Most of the important political decisions of the Centre Party were taken in a stuffy and rather gloomy little room in the Catholic Presbytery in the Koeniggraetzerstrasse, where the thin and ascetic Jesuit Father Rauterkus lived No Centre Party proposal was ever laid before the House until it had been worked out and approved in the Koeniggraetzerstrasse. The remarkable old man held all the political wires in his hand, and at every important point he had one of his confidential followers who did his bidding absolutely No one but those in the inner circle of politics knew anything about Father Rauterkus, or of the decisive influence he wielded I cannot remember a single instance in all those twenty five years of his having come forward in any way or of his name ever appearing in print.

The Roman counterpart to Father Rauterkus was Father Carlo Bricarelli. He also remained well in the background and from the Civiltà Cattolica in Rome he exercised great influence on the world policy of the Catholic Church.

The German Catholic clergy were patriotic, but they were not nationalistic they were thoroughly German, but they were not amiably disposed towards Prussianism. In this respect they were unlike the Protestant clergy whose Prussian military discipline was softened only by a certain spiritual humanity The Evangelical Church in Germany based itself on the State the Catholic Church based itself on the Vatican and its world policy

The right half of the Centre Party took on a deeper and deeper nationalist tone until on the extreme Right it almost touched the Nazis the left half became more and more left until on its extreme edge it was almost Communistic. In the German parliament the transition from extreme Right to

extreme Left was very gradual. The neighbouring groupings in the scale were not sharply differentiated, and the dominating factor of the whole was that they were all, from the extreme Right to the extreme Left, more or less, consciously or unconsciously, nationalist the *Deutschland ueber Alles* arrogance affected them all to a greater or lesser degree.

The *enfant terrible* of the House was Matthias Erzberger He was the main mouthpiece of the Centre Party Both Ludendorff and von Tirpitz hated him, and they did their utmost to get rid of him. He had an irritating habit of embarrassing them with the simplest and most innocent-sounding questions. When on one occasion von Tirpitz, boasting of the effects of his blockade, declared that the whole Australian harvest could not be shipped on his account and was being eaten by mice, Erzberger rose to a question and without calling von Tirpitz a liar he asked how many mice his Right Honourable friend thought would be sufficient to do the job thoroughly And on another occasion, when Ludendorff demanded that all brass door knockers and handles should be collected for scrap to assist the war effort, Erzberger asked drily And what comes after the door knobs?"

Erzberger has been called a defeatist. He was not a defeatist at all he was merely one of the first to recognize that Germany could not win the war and it was this recognition that made him work for peace as early as 1917 Erzberger was a patriot, but Catholicism meant more to him than the German Reich and his aim was to found a Catholic Reich, with its Centre in Rome, if possible, but at least in Vienna. He was prepared to make far reaching concessions in order to achieve his aim, and he established relations with all sorts of people, many of them unfortunately of very little real influence. Sometimes he set his hopes on France, sometimes on Italy but in my opinion he harvested chiefly indiscretions and these activities did rather more harm than good to the cause of peace.

Erzberger's idea was the formation of an alliance of all Catholic peoples from the eastern borders of Hungary to the Atlantic coasts of France and Spain. Up to a point the French had some such idea themselves, but with this difference, that France had not the slightest intention of restoring the power of

the Catholic Church Erzberger's ideas were not popular in Germany even amongst Catholics, but for want of a better policy they were supported by the men behind the Centre Party, including the big Catholic industrialists headed by old August Thyssen Erzberger's influence increased as the power of his political and military opponents declined as a result of the unfavourable progress of the war By the end of the war it was so great that he was appointed leader of the German Armistice Commission, and during the last year of the war 'the Erzberger Office" was an influential centre into which almost all important official and unofficial channels of information ran

During this period I was at the front almost constantly but occasionally Erzberger recalled me for medical consultations. At a time when I happened to be in Brussels to organize special training courses for doctors behind the lines I received urgent instructions to return to Berlin at once. When I arrived Erzberger told me that the Gallipoli front was in danger of collapse owing to a shortage of ammunition. He had made arrangements to send large quantities of munitions by rail via Roumania and Bulgaria, and to this end he had bribed a certain Roumanian Minister who had then given instructions for the consignments to pass through Roumania. However his brother who was also a Minister wanted to be bribed too and he was holding up the frontier crossing into Bulgaria. It had been suggested that the frontier guards should be put out of the way with poison What did I think of it?

I didn t think much of it and I refused to have anything to do with it. In any case, a few blonde ladies and a battery of champagne bottles proved every bit as effective. The guards awoke with a headache and perhaps a bad conscience, and the consignment was through. My medical conscience had won a clear-cut victory over my patriotism. Not that it helped much in any case the end was no longer in doubt. The front in the West was on the point of collapse. The morale of the people was extremely depressed Germany needed an armistice urgently The discussion as to how the affair should be conducted lasted only a few days. Erzberger had already chosen the members of the Commission which was to go under his leadership to a spot appointed by the Entente Powers. The

members were all friends of his, including Count Bernsdorf, the diplomat, and General von Winterfeld who was well known to the French and enjoyed some sympathy in France. He had been severely injured at the last peace-time manoeuvres in France, at which he was present as German military attaché, and the French had shown him the greatest kindness and consideration.

Before Erzberger left Berlin with his Commission to meet the Entente he lunched at my house. As good luck would have it a grateful patient had presented us with some very good provisions, and we did our best not to send Erzberger off on his unenviable mission hungry There was plenty to eat and plenty to drink, particularly as my wife had lost her appetite as a result of the general depression which weighed on Germany during those critical days. But neither Erzberger's good spirits nor his appetite seemed to have suffered and he ate and drank with great relish. In fact he had no time to talk, although my wife bombarded him with the anxious questions of a despairing patriot. Erzberger listened to it all—or perhaps he didn t, for he made no reply and it was only when we had arrived at the coffee and the brandy that he turned to her and spoke the historic words of comfort, enunciated in a broad Swabian accent

'Don t cry my dear Melanie. It's not going to be as bad as all that. *Sixty million corpses would stink too much.*

And then he left in his car which was already waiting at the door below and went off to meet the French officers. They took him and his companions and led them blindfolded to somewhere in a wood. Where it was they did not know, and as one tree looks very much like another there was little to help them in their efforts to establish their whereabouts. The authorization of the Commission had been signed by Prince Max von Baden who was Germany's Chancellor when Erzberger set out, but during the day Ebert had been appointed Reich s President, and a telegram *en clair* was immediately sent off to Erzberger Accept Armistice under any conditions Reich s President Schlum" Marshal Foch waved the telegram under Erzberger's nose in great anger and excitement. 'Reich s President Schlum," he snorted. "Who is this Reich s President

Schluss? I've never heard of him." He seemed to think the Germans were up to some new trick, and wanted to show right away with determination that it wouldn't go down. It proved impossible to convince him that "Schluss" was the German word for "Stop" and negotiations hung fire until the arrival of a more detailed telegram formally confirming Erzberger as leader of the Commission and Germany's plenipotentiary

The German delegates were still ignorant of their whereabouts, and the soldiers who had been told off to guard them had obviously been sworn to silence. And then Erzberger had a brilliant idea, typical of his peasant slyness. It was Sunday so he casually asked the orderly who served breakfast where the nearest church was, as he would like to attend Mass. Without thinking, the orderly mentioned the nearest village. After that it was easy for von Winterfeld to look up his General Staff map and find out where they were. It was the historic forest of Compiègne.

Three years later Erzberger was again in the news. For the last time. The nationalistic war mongers who had plunged Europe into disaster wanted a scapegoat for their failure to win the war It was their usual noble custom. They chose Erzberger and on August 26th, 1921 he was murdered whilst out walking in the Black Forest.

CHAPTER VIII

THE FAILURE OF THE REPUBLIC

AFTER THE ARMISTICE sad and hard times came for everyone, high and low in Germany Many suffered severe privations. There were disturbances, and the whole atmosphere was one of insecurity Germany was experiencing revolution.

On November 9th I arrived in Frankfort-on Main from Koenigstein on official business. Armed representatives of the Workers and Soldiers Council deprived me of my sword. It was done with great politeness and many apologies. They also asked for my name and address in order that the sword could be returned to me "after the revolution" It was, too About four months later it reached me very neatly packed from some-

where in Brunswick. When I arrived at the military hospital I was informed by a private, who stood to attention with an old time click of the heels when he addressed me, that he had been instructed by the Workers and Soldiers Council to take charge, but that for the rest I was to carry on without let or hindrance. And that was more or less typical.

There were, it is true, small bands of *maraudeurs* who did their best to fish in troubled waters, but on the whole there was very little of the wild tumult usually associated with the idea of revolution. There were processions and mass demonstrations of cheering shouting shrieking men and women, but they were all very orderly They advanced in serried ranks, carrying red flags, and marshals with arm-bands marched at their sides—and they usually took care not to tread on the grass. I am not generalising from one experience. My duties took me all over Germany at the time, and everywhere I saw the same picture. It might be a revolution, but it was a very peaceable one.

One day I was standing with Fritz von Gans, one of my wife's uncles, on the balcony of his house looking at one such spectacle. He was over eighty by that time and he had been together with his two brothers Adolf and Leo, one of the leading pioneers of Germany's chemical industry We were a little anxious about him in those uncertain days, but he was not in the least worried about himself.

"You know he said, 'I went through the 1848 revolution. I don't like these peaceful revolutions at all We shall have to pay for it one day"

Well the disappointed veteran of 1848 was right. And even that hadn't been much of a revolution anyway

I remember another typical instance. Whilst Karl Liebknecht and Rosa Luxemburg led vast columns of revolutionary demonstrators into the Tiergarten past the horribly ornate Pillar of Winged Victory there was an industrious employee of the Berlin Town Council busily cleaning the mosaic picture representing the victorious entry of Kaiser Friedrich into Berlin after the Franco-Prussian War

I also witnessed another picture the march past of the army Hindenburg had brought back over the Rhine. I stood on the great staging at Brandenburg Gate and watched them now

through along Unter den Linden That didn t look like a defeated army Their uniforms were cleaned and pressed and they marched as smartly as ever, doing what is known in this country as the goose-step with great vim. But a few hundred yards further along, at the famous Kranzler Corner of the Friedrichstrasse, they broke ranks and turned into a chaotic mob Not long after that some of them were firing at pedestrians from the windows and roofs of the newspaper quarter People in the mass are always irrational and not to be trusted. Their temper veers like a weathercock in a gust of wind

However, the police soon had the matter in hand. The officers had all disappeared Not one of them was to be seen, and not one of them made any attempt to save the honour of the flag under which they had taken the oath. In fact the only people who hurried to ground were the scared officers, and the chief of them all General Ludendorff, donned a pair of blue glasses as a disguise and dashed off helter-skelter to Sweden leaving the beloved Fatherland to get along as well as it could They can prance and bluster when they win, but they don t make good or dignified losers

Only later did a number of armed bands get together—individuals of the Schlageter type drunken, reckless students, bankrupt existences dubious characters who donned a pseudo-patriotic cloak to go about their banditry better and give it a quasi-legal air The nationalistic officers who had fled into hiding before they were hurt contented themselves with underground intrigues until the time arrived when they could appear on the surface again and flaunt an even more arrogant nationalism.

It must not be thought that the German Army was entirely disbanded. Far from it with the active assistance of the new Socialist Ministers the wool was pulled over the eyes of the Inter Allied Control Commission and the most reliable and best-organized units were kept in being For a while, but only for a short while, the General Staff disappeared. The militarists were scattered over the country but they came together in conventicles. One of their chief aiders and abettors was the Social Democratic War Minister Noske, and I can remember more than one sharp clash between him and Erzberger The

man was a boon and a blessing to the militarists. Many measures a professional soldier would never have dared to propose were carried out by this man, and in general it is true to say that the defeated Generals received far more support from the Socialist Ministers than they could ever have obtained from a frankly nationalist government at that period. The Socialist leaders rendered shameful service to German militarism, but they paid for it in the end. When the time came they received contemptuous dismissal instead of thanks German Socialism had nourished a viper in its bosom.

The inherited weakness of German Democracy in general was a slavish devotion to hard and fast principles which made it quite impossible ever to summon up sufficient energy to seize opportunity even when it afforded Cowardly indecision was perhaps the greatest weakness of Germany's Socialists Their orthodox worship of arid principles, their doctrinaire outlook, their refusal to act at critical moments, and their concentration on a supposedly impressive publicity and literature made Hitler's triumph possible. Faced with the necessity of pursuing practical democratic politics, the German Republic failed to encourage the vigorous development of democratic ideas, and it degenerated into a distorted image of what a democratic republic might and should have been.

No attempt was made to strengthen the democratic republican idea, and day after day it lost a little more of that small fund of popularity it at one time possessed amongst the German people, until finally nothing was left. Thanks to its own cowardly inactivity the democratic republic and its flag became objects of contempt for the middle classes. Snobbery did the rest. To be a Republican was to be an inferior sort of person. All "the best people" were anti Republicans, and it became a mark of good class to dissociate oneself from the proletarian gang" Politically the German middle class was rotten. Primarily from snobbery it rejected the Republic, but that was its sole political platform it had no constructive proposals and nothing to put in the Republic's place. The Weimar Republic was attacked from above, abused with impunity and dismissed with enormous contempt. And there was no effective defence from below

Lack of political character was the hallmark of the day and in the meantime a new army was being organized in the background. Its task was to defend the German Reich but by no means the German Republic. The first weakly democratic innovations in the Reichswehr disappeared and the spirit of the Potsdam Guards returned in all its old feudal arrogance. The new officers corps had their own old honour, old position and good old special privileges.

It must not be thought that this development took place in defiance of the Government. By no means. On the contrary it had their support, to the deep dishonour of Germany's Socialists. They had never rid themselves of the old cadaver discipline bred in the bone from childhood and the sight of a smart uniform still gave them the same old thrill. When things began to get too bad, feeble criticisms were offered in parliament, but the mouths of those few men who were in earnest opposition were soon stopped. Germany secretly nourished the spirit of revenge. Her public life was double-faced. Her character was deceitful. It was this lack of civic courage which finally rotted away the very basis of the democratic republic until it collapsed in itself.

And in this general baseness the biggest fraud and blackguard in world history, though for a time he undoubtedly believed in his own idiocies, could find acceptance as a liberator. In a world of characterless careerists and politically dishonest figures a man with a conviction, no matter how unworthy it was, had at least that advantage. A "Leader" had arisen. It is true that he babbled utter nonsense, but at least he had a positive programme, no matter how fundamentally evil and fundamentally foolish it might be. Revenge! shrieked the paper hanger turned political quack, and masses of Germans flung themselves at his feet.

This literal maniac was not a deliberate liar in the ordinary sense. He pronounced a false doctrine, but he believed in it himself. That is the pseudology of a lunatic, but not of a liar. I find it difficult to use the word "honest" in connection with one of the greatest criminals in world history, but fundamentally Hitler was honest. He was honest in the sense of one of Carl Fuerstenberg's famous witticisms. On hearing of the sudden

death of a colleague with a thoroughly well-earned evil reputation, the well-known Berlin banker declared "What a pity! He was the only honest man on the whole Exchange. He looked like a scoundrel and he was a scoundrel." The latter statesman, philosopher and politician Hitler wrote down beforehand in his infamous book everything he intended to do, and then by easy stages he did it all. The senseless and turgid rubbish he wrote was in defiance of all human understanding and of all decent human feeling, but for him it was true.

Medically speaking Hitler was a case of maniac depressive lunacy and not even an interesting one. Psychologically speaking the German people represented a much more interesting case for accepting his lunatic ideas and enthusiastically putting them into horrible practice. I am not prepared to rehabilitate the poor loony Hitler by making him responsible for his actions, but at least that 34 per cent. of the German people who voted for him must bear the responsibility before the world. As a doctor I have often listened to the babble of lunatics—irresponsible in the true sense of the word. But if the warders had adopted the criminal nonsense and put it into practice I should have called in the Public Prosecutor.

Although even in September 1918 the abdication of the Kaiser was already being freely discussed in confidential reports to the big industrialists, the more sober military leaders and responsible Government officials, the Social Democratic Party was quite unprepared to take over power when the abdication actually took place, and totally unable or unwilling to use its victory. The negotiations which finally led to the abdication took months, for Wilhelm was most unwilling to go and he retreated only under compulsion from one line of defence to the next until finally a promise that the Hohenzollern fortune should not be touched persuaded him to take the historic step. When Ebert took over as the first Reich's President he and his Government were in a state of utmost confusion and embarrassment.

Ebert had been a saddler and later on the proprietor of a small restaurant. He had the solidity and real dignity of an honest craftsman and father of a family who puts on his best suit and goes to church on Sundays—unless he happens to

what is called a free-thinker Nestroy has observed that when God gives a man office he gives understanding to go with it, and therefore Government officials are not appointed by God Ebert obviously received his understanding through his office. As might be imagined, he was no revolutionary far from it, and he is credibly reported to have declared that he hated the idea of revolution like the plague. He was a simple man who lived modestly and it is to his credit that even in high office he never sought or pretended to be anything else He was perhaps the only one of them all who occupied a prominent position with a certain dignity and without getting a swelled head His wife, too possessed real dignity in her simple way, and she too kept her head in her new position and never attempted to push herself into the foreground One incident which has always remained in my mind will illustrate better than any words of mine just what I mean. I was present at a social function at which the stiff necked arrogant Potsdam clique was also represented The conversation turned to the beauties of Taormina. Frau Ebert spoke of the famous Sicilian beauty spot with real love and enthusiasm. One of the ladies from Potsdam, obviously with malicious intent, let it be seen from her remarks that she found it a little strange that anyone in Frau Ebert s former humble position should have been able to undertake the long and expensive journey to this playground of the rich The First Lady of the Reich looked at the woman coolly and replied with matter-of fact dignity and without embarrassment I was in service then

I admired Frau Ebert. She knew her position. It was a difficult one. She filled it admirably and she never failed in simple tact. It was this same sterling character which helped her to bear with equal calmness and dignity the persecutions and humiliations to which she was subjected later by the crowing Nazi louts. She lived in a small flat and cherished her memories, and I believe she was happier there than in the Reich s President s Palace in the Wilhelmstrasse. She never got over the death of her husband, particularly as she had the feeling that his last illness need not have proved fatal. August Bier who performed the operation for appendicitis on her husband, was much taken up with homoeopathy at the time,

and he treated the post-operative bowel paralysis with ineffective measures and fatal results for the first Reich's President of the German Republic.

Unfortunately very few of the new figureheads resembled the Eberts. Most of them had not sufficient character to stand the sudden transition to power or at least, office. Modesty is a rare virtue, but for me at least it is a criterion of real worth. When inferior characters suddenly come to power and influence they invariably lose their heads. If they meet with no opposition they become impertinent and abuse their power If they meet with determined opposition they become craven and crumple up The aristocrat seems to be given a certain dignity in the cradle, and tact seldom fails him. In important matters I would always sooner negotiate with an aristocratic type than with many an over-clever proletarian or cunning lawyer of low breeding The aristocratic, monocled gaunt von Seeckt could do what he liked with his superior the swollen headed and yet almost servile War Minister the jumped up proletarian Noske. He could use the former sergeant-major for doing things which, as a clever diplomat, he would never have dreamed of doing himself

The notorious 'Governess of the Wilhelmstrasse was the cunning Secretary of State Meissner His political creed was self-advancement, and he sacrificed any convictions he may originally have possessed to it. He served the Socialist Ebert and after that he served the monarchist Hindenburg and he ended up by serving the Nazi Hitler with the same willingness. Originally he had been a minor railway official, but when the revolution came he was flushed to the surface, and there he stayed bobbing along in all kinds of political weather His petty bureaucratic soul loved a luxurious life with plenty of caviar and champagne. His wife was a pushing ambitious and titivated blonde. Most of his friends were rich and powerful Jews. One hand washes the other they were useful to him, and he was useful to them.

There was no doubt about his political dexterity During his long career he arranged the formation of twenty-eight new Cabinets, and in every political constellation he saw to it that there was comfortable room for him. He was no lover of the

Nazis and he described to me with great glee Hitler's first interview with the ageing Reich's President Hindenburg. The old Marshal had not offered the former Corporal a chair, and Hitler had been kept standing to attention before him until finally dismissed without the usual handshake. But in the end, undoubtedly to save himself, Meissner became the willing tool of Goebbels, assisted in the forging of Hindenburg's testament and lent his countenance to the so-called "Joseph's Legend"—after Joseph Goebbels.

I was personally acquainted with many members of these twenty-eight Cabinets, and certainly with most of the leading lights but when I try to recall even one really prominent figure, apart from Walther Rathenau I cannot. Not one of them left any permanent mark on Germany's political life. They were all superficial mediocre, and without real political courage and initiative. Most of them seemed to have become Ministers because they were good fellows at a *Bier Abend* rather than for any political qualities. The men of real political format were in the Democratic Party but its leadership was so hopelessly doctrinaire and it was so out of touch with reality that its popular support slumped heavily at each successive election until finally nothing of it was left.

I don't want to be misunderstood the men I am discussing were not all worthless and characterless. Indeed, amongst them there were many highly educated men of wide interests and personal integrity men I was glad to number amongst my friends but I am judging them now from the standpoint of statesmanship and dominating political ability and the standard must therefore be higher than for ordinary everyday life. I was personally acquainted with almost every Reich's Chancellor and leading Minister throughout the Republic. They were almost all honest men, but they were not statesmen.

At a time when the Nazis were already committing repeated and systematic acts of provocative violence up and down the country, and Frick in Thuringia was openly challenging the power of the Reich's Government, I travelled back from Frankfort-on-Main to Berlin with the then Reich's Chancellor Wirth. We discussed his troubles It was already clear that the Reichswehr sympathized strongly with the Nazis—so much

so in fact that Wirth himself suspected that if it came to the point the Reichswehr would turn against the Government. The *only organized force* the Government could still rely on was the police. I told him that if he wanted to find out one way or the other exactly where the Reichswehr would stand in the event of trouble he should put a company or two of police in Reichswehr uniform and send them into action against the Nazis in Thuringia. No doubt this was an expedient that would never have been necessary or desirable in a firmly founded, well-ordered State, but the Weimar Republic was nothing of the sort, and desperate diseases often require desperate remedies. Before becoming Reich's Chancellor Wirth had been a headmaster He still was in outlook. He was horrified at the idea. Horrified and rather indignant. "But that would be perfidious," he exclaimed. "Blessed are the pure in spirit," I replied. A few weeks later armed fighting took place in Thuringia between the Nazis and workers in which the Nazis gained the day and so consolidated their power that they were able to use Thuringia as a base for operations farther afield

And then there was Paul Loebe, the Social Democratic President of the Reichstag The former printer was humane and just in private life, with the puritanical outlook of the little man. When the Nazis flocked into parliament for the first time as the result of the 1931 elections it devolved on him to decide what place in the House they should occupy These vulgar hoodlums and bankrupt existences obviously belonged on the extreme left of the House, beyond the Communists, but because they cunningly called themselves "National" Loebe was fool enough to put them on the extreme right of the House. Thanks to this piece of political illiteracy the Nazis became so to speak, "acceptable at court" Goebbels was never in any doubt as to the enormous advantage of this position for his party Every social snob could now openly acknowledge membership Apart from being a Socialist Paul Loebe was also an enthusiastic annexationist. He seemed to have more souls in his breast than even Faustus.

And then there was the much-over rated Stresemann, an utter mediocrity His horizon hardly broadened from the day

when as son of a small beer restaurant proprietor he wrote his doctoral dissertation on the retail beer trade. In his later political ideas he seems to have been influenced by the opinions of a clever Polish journalist, Antonina Vallentin. By the time he became at all politically known outside Germany Stresemann was a hopelessly sick man with goitre and Bright's disease, and he was greatly hindered by his state of health. He managed to sign the Locarno Treaty in person, but his doctors practically had to carry him there. At the League of Nations session which dealt with the question of the Rhineland occupation he had to leave matters in the hands of the Social Democrat Hermann Mueller. Outwardly Stresemann was in favour of the so-called Fulfilment Policy under which Germany was to carry out her obligations under the Peace Treaty but in reality he encouraged the anti treaty development of the Reichswehr to the utmost.

Walther Rathenau was head and shoulders above them all. He was a man of real breeding with a great talent for languages and oratory. When he spoke there was no subsequent need to alter as much as a comma for print. He had a very high forehead and two deep-set dark eyes. With his small pointed beard he looked like an old Spanish nobleman and he acted like one. He had a real presence and he conducted himself with studied dignity in all situations. Sometimes I had the feeling that it was all too studied, but it was extremely well done and with great discretion. Even amongst friends his attitude was still reserved, and his presence starched the atmosphere of any society. Jesus in tails, Carl Fuerstenberg called him. He was a real esthete, dignified in all things, and he lived for beauty—a platonic and passionless beauty. He had a deep philosophical grounding and he was extraordinarily widely read, but his thought was, I always felt, excessively disciplined. He was over intellectualized, of the type that finds it difficult to arrive at and hold fast to a simple truth. My knowledge of him convinces me that *au fond* he was a Talmudist and inclined to interpret a fact according to a situation.

In his way of life he was an aristocratic Puritan. He was extremely fastidious in his general judgments, but unassuming as far as his own person was concerned. *His writings show him*

to have been a theoretically convinced Communist. At the same time he was an ardent patriot (when Germany faced collapse at the end of the war his was almost the role of a Gambetta) and a Democrat, though in his personal relations he was extremely aristocratic and exclusive. He was a capitalist industrialist and a President of trusts, but he aimed always at social justice for the people. He was a Jew more from defiance than convictions, but he never forgot that he was a Jew. As Germany's Foreign Minister he signed the Rapallo Treaty with Soviet Russia, but nevertheless he was looked on with favour by the Western Powers and he increased Germany's prestige with the League Council.

He was not a man of one piece. One could have made half a dozen men out of the pieces which went to make up Rathenau and perhaps each of those pieces would have been then greater than the whole. That is a form of tragedy sometimes met with if, indeed one regards it as a tragedy. Had Rathenau not taken Germany's raw material supplies in hand so successfully in 1915 her fighting front would have collapsed there and then. It was primarily due to his strange discordant genius that Germany was able to hold out for so long in the first world war and when disaster threatened in 1918 he was the only one of Germany's leaders to favour a *levée en masse*. And yet Rathenau was a European *par excellence* and he was the first to restore Germany's damaged credit in the world at Geneva. And for that the Nazis murdered him in the very early days of the democratic republic.

The far reaching significance of this insolent provocative and monstrous crime was not recognized by a weak government divided against itself and undermined by party intrigue. It is true that they gave the victim an official funeral with all honours, let his body lie in state in the Reichstag, and organized an impressive funeral cortege through the town; and they even passed an Exceptional Law for the Protection of the Republic but after a while its provisions were used chiefly against the Left. The three so-called Republican Parties the Centre Party the Democratic Party and the Social Democratic Party, also used the occasion to found the Reich's Banner Black, and Gold (the colours of the unfortunate republic). But

opportunity for taking real and radical measures against Nazi fascism was bungled and finally missed altogether The result was that the Nazi gang became more insolent and challenging than ever They had tasted blood and their murderous appetites grew And there was not one statesman of format with courage enough to meet the challenge and break them as they could have been broken. The orthodox pseudo-morality which demanded that the bureaucratic letter of the law should be observed down to the final comma even at a time when the highest interests of the State cried out for swift and determined action, a mechanical *fiat justitia, pereat mundus* was once again the cloak for that cowardly inactivity which marked the governments of the republic for the whole twenty years of its abortive existence.

How shall one judge men like Otto Braun, the Social Democratic Premier of Prussia, or his colleague Severing, the Social Democratic Minister of the Interior who when removed from office by von Papen's *coup de main*, could find nothing better or more effective to do than file a formal plaint with the Reich's court? Their political lives were the grossest caricature of any virile democratic idea.

Small wonder then that the Nazi terrorist organizations spread rapidly all over the country there was nothing to stop them. Their activities became more and more shameless. Conspiracies murderous attacks on individuals, and so-called *Fehme* murders became more and more frequent. Many cases came to the notice of the authorities but little or nothing was done to investigate them and bring the criminals to justice. Connivers in high office regarded them tolerantly as national deeds and the organizations behind them as nuclear units of the new military *renaissance* In consequence the foul deeds of these *condottieri* received a semi-immunity thanks to the fraudulent nationalist cloak under which they were committed.

But it would be wrong to think that only German democracy donned the ass's skin. Didn't the same cowardly *laissez faire* shield budding fascists in other countries too? It certainly did, but in the countries which had emerged from the war as victors this wretched indolence did not prove fatal—that was the only difference. And on the international field the same

evil principle was at work, if any such positive term can be applied to a policy which feebly let things slide. It was wrong "on principle" to interfere in the internal affairs of other countries How *right* and how *comforting it sounded! But if* only one of the leading States in this tired and war weary Europe had summoned up energy and courage enough to intervene against a monstrous state of affairs which threatened them all, how much better off the world would have been how much terrible suffering could have been avoided, how *many millions of lives could have been saved!*

Once again humanity has a chance Will it learn from the past and seize the opportunity? Or will de Rochefoucauld's witty cynicism again be justified?

"We learn but one thing from history the fact that we learn nothing

CHAPTER IX

A CENTRE OF ART AND LETTERS

POLITICALLY THE WEIMAR Republic was a pitiful spectacle, but on other fields its graces were many Post-revolutionary Germany witnessed an unexampled development of the free professions, of the fine arts and of letters. It was as though the arts, held more or less in bond by Hohenzollern absolutism, had burst their chains. A new and refreshing breeze swept over the country Even at the beginning of the century the potential artistic energy of Germany began to show itself despite Wilhelm and his commonplace ideas, but that was chiefly in the freer German States such as Bavaria and Wurtemberg Berlin still seemed to sleep. French and English influences were at work in South Germany Rodin and the Barbizon school, Ruskin, William Morris Oscar Wilde, Bernard Shaw And the so-called *Jugend* style and Secessionism were evidences of the dynamic forces at work. There was Richard Strauss in music, Klinger in sculpture, Liebermann, Seibl and Slevogt in painting and Hauptmann, Schnitzler Hoffmansthal and Wedekind in the theatre, to mention only the better known representatives of the new movement. But it was only in defeated Germany

value, but they were not influential enough to raise the purchase price. All the documents in the case are still in the possession of my friend Professor Yahuda, whom I first met in London. It redounds to Germany's credit that despite her economic difficulties she paid an even higher price for the treasure and placed it in the capable and worthy hands of Professor Wiegand. Archæology is, so to speak, the biological analysis of human history and it was my own inborn biological hang which made me deeply interested in it, and to the best of my ability I supported not only German archæology but also the Syrian excavations carried out by the Austrian Archæological Society.

The applied arts also flourished in this great spring of German freedom (I need hardly say that I use the word freedom here in no political sense). New materials were drawn upon and provided fresh inspiration. Bruno Paul was one of the leading spirits on this field. He was a visionary of sound practical ability and he had a real genius for gathering everyone around him who had something new to do or say. I would not call him a genius, but he certainly showed genius in organizing and helping pioneers to blaze new paths. He was not a man who spoke much, and when he did speak it was always preceded by a little nervous cough. But what he did say was very much to the point. I had quite a lot to do with him in connection with the building of two of my houses, and I learnt much from him.

The work which really made his name was, I suppose, the building of Haus Hainerberg in the Taunus for my parents-in-law. During the first world war my mother in law turned it into a sort of recreation and rest home for convalescent officers. One of the guests was a Lieutenant named Ribbentrop. He was much disliked by the staff, who christened him Drippy-Droppy. The von came later. When the Nazis came to power von Ribbentrop as he was by then, confiscated the house and made it into a recreation and rest home for Nazis. A picture of the house was used on one of the Nazi postage stamps to create the impression that this beautiful rest home was one of the cultural achievements of the Nazi regime.

Applied art in Germany did much to improve taste in general and get rid of the monstrosities of Wilhelminian taste—I say

Wilhelminian taste, but the type of thing I mean was not confined to Germany The long period of economic prosperity throughout Europe unfortunately coincided with a deplorable artistic period. The middle classes in Germany who had become rich, spent their money on ponderous furniture over loaded with knobs, scrolls and carvings' plush hangings with many tassels, enormous over-decorated mantel pieces, packed with ornaments' and all the rest of the horror summed up in the one expressive German word *Kitsch*. Part of the battle against this sort of thing was the opening of an *Anti-Kitsch* Museum in Stuttgart, where a collection of weird and wonderful examples of the *genre* formed a sort of domestic art chamber of horrors.

When the period of intense housing shortage set in and businesses began to line the Kurfuerstendam, formerly almost exclusively a residential street, many of the worst monstrosities which disgraced the façades were done away with and, with the help of modern architects, replaced by new simple and dignified lines. The good work of improving public taste was never completed Much had been done, but much still remained to be done, when the tawdry vulgarity of Hitlerism descended like a blight. But it is at least deeply satisfactory to know that the new barbarians could not undo all the work that had been done, though they did their best. They opened two exhibitions in Munich, the one containing "pure Nazi art" (Schickelgruber as Lohengrin complete with shining armour upraised sword and patient swan, etc.) and the other intended as a warning example of what the public ought not to like. All the items in this latter exhibition were "degenerate art Unfortunately for the organizers your true Nazi has no use for art of any sort, not even for anything which claims to be art, so he didn t go to either whilst the general public practically boycotted the pious exhibition of Nazi art and flocked to the other one, with the result that it had to be closed to put an end to what had turned into a demonstration. Those of us who had done our best to support the movement towards better taste were deeply gratified and highly amused our seed had borne fruit.

All our State institutions might be internationalized with

advantage, but art must remain national at least up to a point. I say 'must' but it will on its own It does already It is generally recognized to-day that the roots of art lie in the national character Not even the greatest genius rises above or goes beyond these limits. The German musician Haendel went to England changed his name to Handel, and lived there for the rest of his life, but even at the end of it he never produced anything but German music. Dvořák remained a Czech of Czechs in the United States, even when he used American folk-song motifs. Liszt was a Hungarian in Weimar Spontini an Italian in Berlin Chopin a Pole in Paris Rachmaninoff a Russian in the United States. Lukas Cranach and Holbein remained German in England Rubens a Belgian whether in Vienna or Italy Poets change even less than painters and musicians whilst scientists themselves remain in the last resort a product of the whole national (not to be confused with nationalist) atmosphere which produces them. The Jews, scattered all over the world and partakers in many national cultures, are a living proof of this thesis Many Jews have won Nobel Prizes, but it is interesting to note that no Jew from Montenegro, Bulgaria or Tierra del Fuego was ever amongst them. Only those Jews who enjoyed the privilege of living in highly civilized and cultured countries had a chance Thus race alone is not the deciding factor National environment is the deciding factor

In Germany education remained the affair of the individual States with the result that there was lively rivalry between them. Each wanted to do better than the other and the competition was not a bad thing In fact there is no doubt that Germany owed the leading cultural position she occupied in the world for a considerable period to this inter-State competition in cultural matters. Two-and-twenty universities competed vigorously with each other and the same thing was true of Italy until political unification put an end to it and brought all the universities under centralized direction Almost every duodecimo principality in Germany had not only its own central educational institutions but also its own opera and other art centres and then, of course, it depended on the munificence and artistic taste and understanding of the Royal

ruler whether the standard was high or not. It very often was, as a matter of prestige if nothing else. Fortunately the German revolution of 1918 did not interfere with this healthy particularism, though it drove out the Tom Thumb royalties. It is right and proper and altogether advantageous, that a certain measure *of particularism should remain both in science and* art. When Hitler came to power in Germany it was one of the many good things he abolished.

Prussia was the biggest and most powerful State in the German Reich, and it was Prussia which seized the cultural lead The technical organizer of Prussian science, if I can use such an expression and be understood, was the permanent official Althoff. He lived simply and his whole passion was in his work. He coupled healthy cynicism with a deep knowledge of human nature. Both stood him in very good stead. He knew the weakness of human beings for decorations and titles and he exploited it as another man would exploit a gold mine. The "voluntary subscriptions" he obtained in this way went to further his great plans. Amongst other things he re-organized the whole system of higher education and brought the main body of scientific research into special research institutes. He was instrumental in founding innumerable new central institutes, and the crowning effort was the foundation of the famous Kaiser Wilhelm Society A whole series of world-famous institutes were set up within the framework of this society for the study of physics, chemistry biology plant physiology experimental botanics, tannery navigation, etc., and provided with the best obtainable personnel, including Harnack, Einstein, Haber Goldschmidt, Bauer Neuberg, Warburg, Hahn and Meitner—men to whom the world of science owes a tremendous debt.

Althoff did not succeed in fulfilling his dream of making the outlying Berlin suburb of Dahlem into a university town, but he laid the basis for it. He died a poor man, although in his time many many millions had passed through his hands to meet the enormous financial burdens his innumerable foundations involved His 'Last Will and Testament' was the crowning piece of cynicism of his life. Although he had nothing he bequeathed large sums to his various institutions, and after

each sum was the name of the prominent banker or industrialist who was instructed to pay it, followed by the particular reward in the next Honours List he was to receive for doing so His frank cynicism was thoroughly justified, and not a man refused to pay the sum 'bequeathed in his name. That was of course, under the Kaiser when the German Republic arrived one of its few revolutionary acts was the abolition of orders and titles. I remember Erzberger once saying to me "This governing business is costing me far too much (he liked to speak in *nomine tuus majestaticus* just because he was a democrat) I'll have to re introduce titles and decorations." With Althoff the business was perfectly honest and straightforward everyone knew exactly why the order decoration or whatever it was had been conferred, and that at least was something that so often remained in impenetrable obscurity

Althoff's republican successor (with the exception of a few weeks right at the beginning when the near-Spartakist Hoffmann was in office) was Haenisch, who came from a well-to-do North-German Conservative family with whom he had broken off relations early on owing to his socialistic tendencies. He was an upright and idealistic man and his determined championing of the oppressed and exploited had made him into the black sheep of his family whose members had no sympathy with such outlandish ideals (as they were then) and still less with any attempt to put them into practice. Haenisch was a tall, broad-shouldered man inclined to put on fat and he was very careless in the matter of clothing Not only did he identify himself with the interests of the masses, but he even adopted their mode of living He married a working-class girl, a happy cheerful soul, and he gave up wearing a collar and tie, and when his high office compelled him to wear them he did so with a carelessness which betokened his contempt.

Haenisch had a real understanding for art. He was open and uncomplicated in his relations, and he could be mildly sarcastic when he thought the situation called for it. He had abandoned his bourgeois upbringing, but it had not altogether let go of him and I think it was this that often prevented his being ruthless and decisive when opportunity demanded. More than once I have heard him complain comically "I wish my

radical predecessor [i.e. Hoffmann] had stayed in office a bit longer. He would have cleared up still more and not left me so much to do." All in all Haenisch was a good, sound character, but he was not a very effective one.

The born proletarian is a different matter. Everything beyond his station he is inclined to dub "Boorjoys" and he is anxious to deprive the "Boorjoys" of everything he would like to see the proletariat have. That is his idea of social justice. He also has a strong tendency to dismiss formal education with contempt, and to attach much more importance to science than to art. In medicine he tends to prefer empirical medicine to school theories; in art the fussy, the overloaded and the highly decorative takes his eye rather than the simple, the serene and the well proportioned. The proletarian either remains too low or aims too high. It takes him time to find the golden mean. He is invariably mistrustful and he mistakes that for healthy scepticism. When in office he has a tendency to back the outsiders, the conspirators, the men with bees in their bonnets, though the real revolutionary elements of science are seldom to be found amongst them. The outsiders think they have been oppressed; there has been a conspiracy to keep them out. It is the aim of the proletarian to free society from such injustices and he is therefore inclined to push such people forward. Of course, sometimes a violet which has been blushing unseen amidst the undergrowth is brought to light, but usually the harvest is of nettles, thistles and thorns.

Haenisch, the would be proletarian, had similar tendencies. Under his ægis the theatres began to produce the works of unknown and third-rate dramatists. Professors and teachers were appointed in various institutes primarily because they had been ignored before. Nature-cure apostles and the champions of obscure methods of treatment (Friedmann's absurd slow worm tuberculin vaccine comes to my mind) were given professorial chairs. Proletarian infants were stuffed with milk heavily reinforced with vitamins—too full of vitamins, as it turned out, for the post-natal clinics were soon faced with serious metabolic disorders as the result of hypervitaminosis. Folk Art was, as might be expected, particularly encouraged until the results showed that the thing was ridiculous. There

is only one kind of art, and that refuses to be categorized, or classified in that sense. I very much doubt whether such an artificially fostered "movement can ever be of any use. In any case, this experimental period soon came to an end and all that remained of it was the abolition of class education, an act of real significance.

After a few years Haenisch was succeeded by the Orientalist Professor Carl Becker a member of the Democratic Party and a man of real classical education with roots in the Stefan George school This circle consisted of literary stylists of a selective rather than democratic outlook. They were patriotic, but by no means nationalistic. When the first world war broke out, Stefan George the leader of the circle, declared "We'll ignore it" The artistic outlook of this circle was an earnest classicism based on Greek ideals Becker chose most of his collaborators from amongst them, and on the whole it must be said that it was not a bad choice

In educational and artistic questions Becker was undoubtedly of exceptional ability but unfortunately he felt that he could get on without political convictions. He was devoted to his task, so much so in fact, that he was anxious to cling to office under all circumstances in order to be able to perform it, and to do this he did his best to avoid trouble with any of the influential political parties. If he could avoid controversy he did. Art and science are certainly in the abstract above or beyond politics, but a Minister in a democratic republic charged with their encouragement just cannot afford to be Under Becker s supine regime the German universities became rotten through and through with radical-nationalistic and Nazi elements, the noisiest and most brutal of all. I am referring here to the faculties rather than to the students. Poor worthy Professor Becker believed that the struggle against brute force and violence could be successfully conducted with purely intellectual and spiritual weapons. When the German universities developed more and more into centres of political tumult rather than of learning he was too weak, too disconcerted and too disheartened to take the knife to the angry abscess and cut it out ruthlessly That was the only solution. He did not adopt it and in consequence Germany s universities

went from bad to worse. In fact, it was from them that violence and brutality spread out into the rest of German public life.

There is a lesson for the future here. Universities should not be permitted the irresponsible independence they abused under the Weimar Republic. Their autonomy should be sufficient to permit the full enjoyment of academic freedom, but no more. A system of university proctors and university justice should be introduced or revived, and the universities should jealously guard their own honour. No opinion and no proper expression of opinion should be persecuted but where the holders of opinions, popular or otherwise, have resort to violence to further them, they must be met by greater violence, and that with all energy and despatch.

I was not only the medical adviser of Becker and his family but also an intimate friend. Where appointments were disputed he often turned to me for advice, and I was partly responsible for the appointment of a number of people one or two of whom subsequently developed into characterless hangers-on of the Nazi regime. No names, no pack drill. The pack drill would be for me for having shown such bad judgment of character.

As I have said, my relationship to Becker was a very close one, and the question of my own appointment to this or that office arose tentatively more than once, but I always refused, and I think I was right to do so. Mine was a Hohenzollern professional appointment, and I felt I could do more good in the background than by taking an official appointment.

Amongst the inner circle of Becker's friends was the dramatist Fritz von Unruh. On one occasion after having spent the evening at Becker's house we walked together through the Tiergarten. It was a lovely night in early summer and the dawn was already beginning to break when we made our way back to my house to have a drink. We had it in my laboratory and there amidst all the usual paraphernalia of a scientist's workshop von Unruh felt himself inspired with the old Homunculus legend, and we discussed the fantastic question of the child in the retort. From that we went on to the moral and legal aspects of the problem of the unwanted child. Suppose a woman was with child and unwilling to bear it, suppose

that the father was in agreement with her and supposing the doctor who was called in to get rid of the unborn child preferred to save it. That was the basic idea of the drama produced so successfully by Reinhardt under the title of 'Phaea'. The conscientious gynaecologist saves the child and brings it up as his own. The child, a girl becomes a famous film actress. The conflict arises when all three—the mother the father and the foster father—make their claims. I was the model for the doctor. The working out of the play and everything connected with its final performance took up a lot of my time and gave me a tremendous amount of pleasure. I have always regarded Phaea as my fourth child in addition to the three I already had.

Despite the weaknesses of Becker as Minister for Fine Arts his reign was a remarkable period of scientific and artistic progress, a real period of magnificent flowering. He founded three new universities, but his main encouragement was given to institutions for scientific research. He also re-organized the elementary-school system. The modernization and enlargement of Schinkel's classic opera house Unter den Linden was carried out under his direction, and it was done with great taste and artistic ability so that the original character of the building was admirably retained. The first estimate of costs was three million marks. In the end it cost twenty-six million marks, but parliament granted it without a murmur. The Kaiser Friedrich Museum was also greatly enriched under Becker. Wiegand the archaeologist was enabled to continue his excavations, and Professor Burghardt was given a free hand in the development of his unique Egyptological museum.

Burghardt came back to Germany from Egypt loaded with rich booty. He was a man of unusually profound knowledge and in consequence he enjoyed a great reputation with the Egyptian authorities. He spoke the language fluently and he could read a papyrus as though it were a modern book. With his crisp dark curly hair and his negroid complexion he might have been mistaken for an Egyptian himself. As an excavator he did not have things all his own way by any means. There were excavators of all nationalities at work, and they were extremely jealous of each other doing their utmost to conceal their own finds and to discover the other fellow's. They were a

handful for the Egyptian authorities to deal with. The first great robber crusades were carried out by Napoleon, and from then on the Egyptologists of all countries fell on Egypt like a flock of vultures. They dug and they tunnelled wherever they thought there was anything of value concealed and they brought up everything they found and hauled it off to their own museums Before long it began to look as though Egypt would be gutted bare, so in the end the Egyptians passed a law prohibiting the export of any antiquity without permission. Many were the schemes and tricks thought up to get round the law but nevertheless, it was no longer so easy and much of value now remained in Egypt.

One day Burghardt found the head of Queen Nefertete, or rather a representation of it It is one of the noblest works of art of any epoch. Burghardt was in no doubt that this game was well worth the candle Queen Nefertete had to go back to Berlin with him. He would have sold his immortal soul for her and scruples played no role. The sculpture was executed in beautiful marble and the Egyptian experts would not have failed to see its great value at once, so Burghardt greased it and then covered it up with plaster By the time he had finished with it the Egyptian authorities gave it no more than a cursory glance before issuing the necessary permit for its export in company with various other items of only minor value. Queen Nefertete went to Berlin, where the revelation caused an artistic sensation. The price Professor Burghardt paid was never to see his beloved Egypt again.

There were many prominent figures of international repute engaged at Germany's universities in those days. Emil Fischer the chemist and Nobel Prizewinner was one of them. He was a man of great character and determination He decided to reckon with thirty years of active scientific life, so he divided this period into three equal parts and he worked ten years each almost to the day on the investigation of (*a*) albumen, (*b*) fats, and (*c*) carbohydrates. The results of each period were embodied in a thick volume. He was a man of great intellectual elasticity and could turn his attentions from one field of scientific research to the other with ease. On one occasion he was travelling to Italy with the Halle clinical specialist Mehring for

the Easter holidays. In Verona the axle of their sleeping-car seized up and a new car had to be coupled onto the train. Emil Fischer spent the hour it took walking up and down the platform. In that time he had discovered the world famous sleeping drug barbituric acid As a compliment to Verona, in which town the inspiration had come to him, he called it Veronal. Most of the sleeping drugs at present on sale commercially no matter under what name, owe their origin either directly or indirectly to Fischer's happy discovery of Veronal. Not that he was always so happy in his discoveries for instance his use of selenium against tumours proved a failure. He died of tuberculosis, and towards the end it greatly reduced his scientific capacities but he worked right up to the last, and then died much as a candle that gutters down to its base and then suddenly goes out.

I was personally acquainted with very many members of the various faculties, but most of them were too pedantically professorial to be worthy of mention here. As scientists they were known in scientific circles, but as individuals they lacked interest. Rubner a Bavarian and the discoverer of calorific metabolism, was a very rough diamond Roethe, the Germanic scholar was a narrow minded super-patriot. Erich Schmidt, a man of very different calibre, was one of the few Europeans left. He carried a whole academy of literary knowledge in his head and he was elegant both in his person and in his style. His masterly Lessing biography is the standard work on the subject. Laue, who was awarded the Nobel Prize for his work in connection with the breaking up of X rays, was a quiet, modest man. When the Nazis came to power he did not openly oppose them, but as far as I know he never did or said anything in their favour And then there was the great Max Planck, who was awarded the Nobel Prize for his quantum theory' In the beginning more from obstinacy than anything else, I suspect, he made a show of opposing the Nazis, and for a time he even protected Einstein s family but then he gave way more suddenly and more completely than was necessary and he even used his great scientific authority to support the Nazi regime on the wireless. How a man of Planck's intellectual and scientific qualities could accept the idea of 'National-Socialist

physics' and place himself under a nitwit like the Heidelberger Lénárt, I don't know. A man can be a nitwit even if he is of some capacity in his profession, and there is no doubt that Lénárt's discovery of the rays named after him was a scientific achievement, but the man's brain was clouded by pathological anti-semitism. I remember the memorable session of the Congress of Naturforscher und Aerzte when Lénárt rose to attack the theory of relativity. Einstein answered him calmly and scientifically developing the objections *ad absurdum*. It was a scientific mangling from which Lénárt never recovered but when Hitler came to power he rose to high place on the strength of his anti-semitism.

Planck suffered tragedy in his domestic life. He had two daughters. One married and died in childbed after an attack of septic tonsillitis. Later on the widower married Planck's second daughter and she suffered exactly the same fate, and two small grandchildren were left motherless. The bitter blow brought him nearer to Einstein than even their joint scientific work. But the ageing scientist seemed to have forgotten his close friendship with Einstein. If I had not myself heard Max Planck supporting Nazi Germany on the wireless I could never have believed it possible.

CHAPTER X

THE TWO RATHENAUS RANTZAU AND RUSSIA

It is clear enough to-day for both friends and foes that Russia is going to play a very important role in the building of whatever new world is going to be built. It was not always as clear. Too many people in responsible positions were both short-sighted and over-anxious. The fear of Russia existed long before the fear of Bolshevism.

One of the rarer spirits who were neither the one nor the other was Emil Rathenau, the father of Walther Rathenau. The latter's great personality and political ability, the high office he held and the tragic end he met have done much to overshadow the father but Emil Rathenau was a figure of

considerable economic and therefore political importance in his own right, a real industrial pioneer

He was one of the founders, one can say the founder of the famous Allgemeine Elektrizitaets Gesellschaft, better known by its initials A.E.G The other three were Felix Deutsch, the son of a famous Cantor at the Breslau Synagogue Paul Mamroth, a small business man of Breslau and Paul Jordan, a young engineer from Baden. The founding of this tremendous industrial undertaking took place in a small and sparsely furnished room. Frau Deutsch afterwards told me that the best piece of furniture was a divan with three legs, which had to be used very carefully

All these four men had remarkable qualities as business men technicians or publicists, and each did much to make the A.E.G into the big firm it is to-day (or was, perhaps) However the outstanding, the really monumental figure was Emil Rathenau. He was an engineer by profession, but I don t think he knew much about physics. His great service to the new firm was that at a time when most people regarded electricity as an interesting scientific problem rather than as a source of energy capable of practical exploitation he recognized its enormous technical and economic significance. One can even say that it was Rathenau who popularized electricity as a source of energy—at least for Europe.

At a session of the Physical Society the mighty Helmholtz himself had declared that whilst the gramophone had a big future, the telephone would never develop beyond the stage of a toy Emil Rathenau was not impressed by this verdict, and he continued his efforts to introduce the telephone. He applied to Stephan, the Reich s Postmaster General of the day for a licence. As luck would have it Stephan was a man of capacity and initiative with an open mind for new things. He listened to Rathenau, recognized the importance of the telephone, and it was introduced German postal services owed very much to Stephan, and Bismarck said of him that he had only one failing 'Vanity weighed him down like a mortgage

I made Emil Rathenau s acquaintance when he was getting on in years and already a sick man, but he made an impression of dynamic energy on me a man of clear judgment and calm

objectivity without a trace of sentiment. He was suffering from diabetic gangrene, but despite very considerable physical pain he still attended all important sessions in person and his will still dominated the concern. He had a keen eye for capacity in others and a real ability for using them in his service. It has been said of him with some justice that his knowledge was not very deep but his ability enormous. When he needed knowledge he bought it. He kept a staff of scientific "coolies" who unlike their employer knew a lot but were not very able. In general, he regarded scientists as means to his practical ends he used them as he wanted them, treated them badly and paid them badly

An example of his unsentimental ruthlessness was his attitude to his patentees. Once the main idea was there he would never allow them to work it out in detail. He feared that an inventor devoted only to the child of his own brain and wearing blinkers against all other influences and considerations, would hamper rather than help forward the practical development of the idea. And therefore he got rid of him.

Emil Rathenau was a self-made man in more than the ordinary sense of the word. He was intensely practical and one of the most original men I have ever met. In all our long conversations and discussions I cannot remember his ever having appealed to anyone else s ideas in support of his own, or ever having used a quotation What he said was his own I have said that he was a self made man he was that in the best sense. He was certainly proud of his successes, and he had a right to be. But as for outward recognition, orders, decorations and the like, he would have none of them. He was Germany's greatest captain of industry and he did not possess a single title or distinction. Wilhelm II was a guest in his house on one occasion, and other guests who were present report that in the middle of a discussion Rathenau asked "Your Majesty do you mind if I have a sandwich? I feel hungry" For anyone else to have desires and express them in the presence of the All Highest was an enormity It must not be thought that this was a demonstration of "Man s pride before the throne of Kings not a bit of it. Emil Rathenau s was an uncomplicated nature. He really was hungry

His career was a vast success, but it was not a success easily won. He had to fight hard and long In a letter published posthumously his son wrote 'For years my father was regarded as a mere adventurer until international recognition made his real significance clear'[a] The prophet is without honour in his own country And how often has Germany hesitated to grant recognition until other countries have first honoured her sons! Emil Rathenau came from one of the old-established Jewish patrician families of Berlin (the Rathenaus the Lieber manns the Herzs the Mendelssohns, the Friedlaenders, the Reichenheims the Marquardts, the Oppenheims, etc.) and he was therefore by no means an uneducated man, but there were big gaps in his education. He had no feeling for music, for instance, and he had very little time for intellectuals. This was probably one of the reasons why the father and his highly intellectual son did not always get on well together It was only towards the end of the old man's life that there was a real *rapprochement* The son Walther was a man of exceptionally wide education and culture Not only was his knowledge of physics and engineering technique most profound, but he was also a truly scholarly man, and it was this last the old man regarded with suspicion. He was practical himself to the point of brutality though in private life he was amiable enough. At one time the son was in charge of a factory in Bitterfeld, and after two years it proved an economic failure. Now Walther Rathenau was a highly capable business man, and the failure was not his fault, but his father was inclined to believe that it was It was only when the son rose to real political eminence that the father began to realize that his son possessed attributes of great value outside the world of business.

Emil Rathenau was fundamentally opposed to the policy of the Kaiser and in consequence he was not *persona grata* in official circles, where he was regarded as something of a *frondeur* To Rathenau the Kaiser's colonial and big navy policy was not only useless but highly dangerous. It is hardly necessary to-day to point out how right he was. For him Germany's natural colony lay on her own eastern doorstep Russia. He was tremendously in favour of what was then becoming known as peaceful penetration and by the

beginning of the century he had already established close commercial relations with Russia, invariably choosing men of radical views as his representatives there. When they came to Berlin they were welcome guests both in the house of Rathenau and in that of his chief partner Felix Deutsch.

Deutsch was of medium height, broad, stocky and tremendously agile. He was devoted to the arts, and in particular music, and he lived in a sort of little palace complete with a very fine organ. He was the brother in law of the popular American banker and mecenas Otto H. Kahn—known to New York as Otto H —who to the end of his days spoke American with a Mannheim accent. The two brothers-in-law were great patrons of the arts. It was in the house of Felix Deutsch that Richard Strauss, seated next to the French Ambassador François Poncet, heard the first performance of twelve songs of his "Kremerspiegel" sung by the very attractive Swedish singer Sigrid Johannsen. But evenings like this represented merely the lyrical side of Felix Deutsch's existence. His business eye was fixed on very unlyrical aims in all parts of the world, and particularly in Russia.

Many leading Bolshevists were in close touch with the A.E.G., some of them were even occasionally its employees, and the tradition of close relations with Russia persisted even after Emil Rathenau's death. The first important foreign agreement defeated Germany was able to sign was the so-called Rapallo Treaty It was drawn up in February in the house of Felix Deutsch though it was not signed and made known to the world until several months later in Rapallo This daring step did not please the rest of the world but it greatly increased the prestige of Walther Rathenau, then Germany's Foreign Minister and President of the A.E.G after his father's death. Walther Rathenau was, of course, acting in the interests of the German Reich when he signed the Rapallo Treaty but the A.E G had played a big role in bringing it about.

Felix Deutsch was a very good friend of mine, and as his house rapidly became a sort of social headquarters for the representatives of the Soviet Power when they were in Berlin I had ample opportunity of making their acquaintance. German influence in the first period of the Russian Revolution was very strong

Germans had done more than any other foreigners to assist in the rebuilding of Russia, and Germany's position was therefore a very favourable one. If Germany had maintained the policy of the two Rathenaus, Felix Deutsch and Rantzau one of her cleverest diplomats the situation to-day would be very very different, and perhaps the world might even have been spared the terrible holocaust it has just experienced. It is another example of the fact that intelligent outsiders very often see farther and do better than the professional experts. I should not like to condemn professional diplomats altogether Count Rantzau himself was an instance of a professional who could see quite as far as the amateur but amongst his colleagues he remained a voice crying aloud in the wilderness, and no one heeded him.

I was deeply impressed by the fact that all the Bolshevist leaders I met were fanatically devoted to their cause. They had the faith of apostles. Not one that I met would ever have compromised his principles, but they were all intelligent men and they were well aware that many of the things they and their comrades had done were wrong and that many of their aims were perhaps impossible to attain but that was immaterial by comparison with their cause as a whole, and without exception, they were all firmly convinced of its righteousness and justification. None of them thought that the social millennium lay round the corner They knew better than most people that fundamental social and economic changes take time to develop, a very long time. They knew too that they would never enjoy the fruits of their struggle It was this fact that stamped them for me as amongst the idealists and the martyrs Your capitalist works for the day for himself and for those nearer him these Bolshevists were working—and often sacrificing their personal happiness and comfort—for the future and for generations to come. They had the courage and self-effacing devotion of fighters in a cause greater than themselves.

I have met many prominent men in my time, representatives of this country's policy or of that cause, and only too often I have found that what they said in public was different to what they were prepared to admit in private. With these Bolshevists it was different even in the most confidential talks

they still passionately upheld their cause. But they were not stiff necked and fanatically orthodox. On the contrary they were all real politicians in the sense of Bismarck, for whom politics represented the science of the attainable. Revolutions need time to mature. The preparation of the ground is the important thing Excessive haste can only imperil the final success Those acquainted with the history of revolutions know that the seed is sown long, long before there is any sign of the first shoots. And this was as true of the Bolshevist Revolution as of any other

It was in 1916, when I was called to Zuerich for a consultation in connection with the banker Leopold Koppel, the owner of the Auer and Osram firms, who was down with pneumonia, that I first made the acquaintance of the man who played perhaps the biggest role in the relations between Russia and the rest of Europe in the first world war His name was Helphand and he was more generally known as Parvus His role was interesting, but thoroughly disreputable. He was a master spy or better a master of espionage. Many threads of the Russian revolutionary emigration went through his hands. He was a thorough-going blackguard of great cunning and enormous insolence a great bluffer but at the same time extraordinarily well informed. Strong principles the man had too the stronger they were the more he had to be paid before he consented to abandon them.

He struck me as a very lively and jovial companion, a man of real wit and intelligence. His appearance was certainly not prepossessing. He had a podgy face with a bearded double chin, and bright little eyes sunk deep in fat. His shortish legs had to carry a corpulent body and when he walked his arms hung back comically as though to maintain his balance. He smoked big and expensive cigars and drank champagne invariably starting off the day with a bottle. Extraordinary stories were told about him. His quarters were in Zuerich in those days and it was from that point of vantage that he directed an organization for espionage and counter-espionage. To give him a formal standing he was supposed to be the Swiss agent of Zaharoff, the Greek dealer in armaments. I don t know whether I can call him a lady's man, but he kept a regular

harem of from four to six young women all blonde and all plump according to his taste. All in all he was a very exceptional personality, and when I returned to Berlin I drew the attention of Count Rantzau who was then German Minister in Copenhagen, to the man's possibilities, and soon after that I heard that Rantzau was using him.

Count Rantzau's estate was in Holstein on the Danish frontier He was the twin brother of the Kaiser's Chamberlain and the nephew of Countess Rantzau one of the intimates of the Kaiserin. All these three Rantzaus were of exceptional intelligence and at the same time of high character Thanks to the privileged position of their family at the Danish Court, which was itself closely related to the Russian Court, they were all well informed of political and social currents in Russia. Count Rantzau's aim was, of course, to separate Russia from the Entente and bring about a separate peace which would release Germany from the fatal struggle on two fronts. In the meantime, at least he succeeded in strengthening Germany's influence at the Russian Court, particularly through the German-born Czarina.

I have said that he used Helphand, and that gentleman had to be paid highly for his services. A contract to the value of 50 million marks for coal deliveries to Denmark was generally expected to fall as usual to Stinnes, but to the astonishment of those not in the know it went to Helphand instead. Kerensky was in power in Russia at the time and the Russian front was wobbling It was Helphand who in return for the Danish contract, organized the sending to Russia in sealed carriages of the first Bolshevist leaders, where they were received by Helphand's agents The revolution came, and with it the whole Russian front dissolved but Germany was robbed of her main reward by the incompetent intervention of the High Command under General Hoffmann. Brest Litovsk followed. It was a fiasco for Germany and a brilliant victory for Trotsky

After the signing of the Armistice Count Rantzau became Germany's Foreign Minister and as such he directed the peace negotiations from Germany's side. His relations and those of the Rathenaus with Russia made it possible to establish very close relations between the two countries, and as a result many

of Germany's military secrets went to Russia together with important General-Staff organization, German officers and aeroplane and submarine experts. A submarine yard was soon established at Odessa and a number of military aerodromes were equipped with the latest German aviation material. Innumerable German officers were seconded to the Russian Red Army as instructors and they greatly helped in its re-organization under Trotsky's leadership I have reason to believe that the Inter Allied Commission was well aware of this German military migration to Russia, but there was little or nothing to be done about it and so I suppose, a blind eye was turned to it.

Rantzau was never prepared to say what he would really do if in his opinion the Peace Treaty proved too onerous, but as a political move he permitted it to be whispered around that in such an event he would refuse to sign. The man who crossed his path at this point was Erzberger who believed that if Germany refused to sign the French would march in and separate North and South Germany He was no more anxious to accept an onerous treaty than Rantzau was, but he was very anxious not to give the French an opportunity to march, and he believed that the great thing was to gain time In his opinion Germany should sign the treaty whatever its terms, and rely on the subsequent break up of Allied solidarity He felt that in a war weary Europe it would be impossible for the Allied Powers to agree on joint action against a defaulting Germany and that none of them, not even France, would be prepared to take the onus of action. To force through his own policy therefore and counter Rantzau s moves Erzberger let it be heard loudly and insistently that whatever the conditions the German National Assembly in Weimar would vote in favour of signature.

I was on very friendly terms with both Rantzau and Erzberger and what they said about each other to me is unprintable. Each relied on my telling the other but I kept my own counsel. In any case, the Centre (Catholic) Party and the Social Democrats decided to support Erzberger and that gave him a clear majority in the National Assembly Once the die was cast there was nothing for Rantzau to do but resign, which

he did leaving it to the Social Democrat Hermann Mueller to sign the Treaty in the name of the German people.

Incidentally Hermann Mueller was very definitely one of the better elements in the Social Democratic Party A man of considerable education and knowledge and of a very refreshing modesty he came from the trade-union movement, and he was one of the very few Social Democrats who did not lose their heads and become contemptible once they rose to position and power

Count Rantzau took the post of Ambassador to Moscow and retained it until his death. He was already a sick man, and his state of health frequently made it necessary for him to return to Berlin for treatment and consultation, so that I continued to see quite a lot of him. It was largely due to his influence that the propaganda of the Communist International, which had begun with great vehemence whilst Joffe was Soviet Ambassador in Berlin, was damped down The Embassy was, of course, extra territorial, and it was very difficult to prove that it was the centre of this propaganda, but the German authorities knew very well that such was the case. Big packing-cases addressed to the Embassy were constantly arriving from Moscow and the German police strongly suspected that they contained the printed propaganda which was flooding Germany at the time. They had resort to a trick. A little accident took place during the unloading at the Friedrichstrasse goods station Whilst several such heavy cases were being taken up in the hoist something went wrong with the works and the cases crashed to the ground and split open—and there were the incriminating pamphlets in great numbers

After that Joffe was sent off to China to continue his activities there, and his place in Berlin was taken by Krestinsky whose final fate was the executioner's bullet. Until Krestinsky and his wife arrived the Soviet Embassy in Unter den Linden had been very demonstratively proletarian, but after that the famous receptions began. Not that Krestinsky's social personality was a particularly attractive one. I never saw him laugh, and I never heard of anyone who did His face was expressionless and there was something of the Mongol in his appearance. He would talk if necessary but never freely He was no social charmer

but he certainly was a capable Ambassador and with the assistance of his wife, who had been a children's doctor in Russia, his monthly receptions were made highly interesting and amusing for the guests, and at the same time, very useful politically for the hosts. Every important Soviet representative arriving from Moscow was introduced at these receptions to political, military and social circles—"mutual sniffing" Bismarck used to call the process.

In the beginning patriotic circles felt it incumbent on them to boycott the Soviet Embassy but Rantzau's influence altered that. In addition the Russians were clever and liberal hosts. They knew that caviare, vodka and the famous zakuska would prove great attractions to the famished Germans, and so there was caviare in mountains, vodka in streams and zakuska in huge piles at these evenings. High military officers, civil servants from the Foreign Office and other Ministries, and many important people of all sorts regularly attended these receptions. For a long time the Social Democratic leaders kept away but in the end they came too. I was always impressed at these receptions by the real dignity of the Russians and the lack of it usually shown by their German Social Democratic colleagues. The receptions were certainly of great value to the Russians The general atmosphere and the unlimited supplies of vodka and wine loosed the tongues of the German guests. The Russians could get information on whatever subject they were interested in but it was utterly impossible to get anything out of them apart from polite generalities.

The atmosphere at these receptions was always very agreeable and very informal, and there was nothing of the usual starchiness of official functions No one was bored. It was a social occasion on which people of many political viewpoints agreed to let their differences rest for a few pleasant hours whilst they made the acquaintance of something new something perhaps with which they disagreed, but in which they were nevertheless keenly interested "Everyone" was there. There were prominent captains of industry and at their elbows German Communists. There were foreign attachés, musicians and artists, authors, inventors, doctors, Berlin society women,

and occasionally one of Gorki's former loves, who seldom proved averse from a little sarcasm at his expense. And then, of course, there was caviare, caviare in viscous streams like molten lava.

Not all the guests, it is true, were prepared to admit it, but consciously or unconsciously they all went away I am sure with the feeling that despite the contradictions, paradoxes, and strangeness, they had come face to face with something new something important and something very big

CHAPTER XI

A *HERRENABEND*

THE SO CALLED *Herrenabend* was very popular in Germany I believe that the adjective *Herren* or gentlemen has given rise to a certain amount of misunderstanding as to the nature of these informal social functions The word *Herren* is not used here in e arrogant sense in which we meet it in *Herren-Klub* i.e., Gentlemen who think it necessary to stress the fact, as distinct from the lower orders and other riff raff The *Herren abend* in Berlin merely meant that the host invited gentlemen exclusively without their ladies—a Stag Party" in other words.

The general interest in Russia, which in those days was quite as lively in Berlin as it is to-day in the rest of the world, was the reason for the stag party to which I invited the diplomat Count Rantzau, who happened to be in town at the time two scientists and Nobel Prize winners, Albert Einstein and Fritz Haber two musicians Fritz Kreisler and Arthur Schnabel two painters, Max Slevogt and Emil Orlik and an old Russian friend of mine, Josef Gruenberg, known affectionately to his friends as Bolshie an orthodontist and iconographer and a real expert on Russian affairs.

At that time Arthur Schnabel was just entering on what has been described as the second period of his art, the Beethoven period, the apotheosis of his artistic career as an interpreter of great piano music. Good living and physical well being played a great role in his life, but his heart was also devoted to the idea of social justice. I see no contradiction there myself, but some

people liked to think there was, and he was known therefore as a "Salon bolshevist'

The guests at my *Herrenabend* were thus a fruitful combination of political and scientific knowledge and artistic feeling and intuition. In my experience the analytical inductive or deductive method will often go wrong in complex questions, and the intuitive grasp of the artist is useful as a compensatory and corrective factor All my guests were known to each other and on friendly and even familiar terms, so that the talk was frank and informal. At this distance of time it is, of course, impossible to recall all the details of our discussion, but one thing remains firmly in my mind the unanimity of our opinion *that the tremendous Russian experiment deserved approval* and encouragement. Each of my guests was a man of wide experience, capable of expressing a valuable and interesting opinion on the struggle between the idealistic conception which had arisen in the east and the materialistic conception which still prevailed in the west.

Count Rantzau was a really exceptional personality At first I felt inclined to compare him with the protagonist of Stevenson s famous story 'Dr Jekyll and Mr Hyde" but that would give a wrong impression. There was really nothing of Hyde about Rantzau. The real split, if such I can call it, in his personality was on a different level. Perhaps I could use the Greek polarity better and speak of Apollo and Dionysius, the two distinct tendencies which played such an important role in their art. Rantzau might have been termed Apolyonistic by day and Dionystic by night. As the hour grew later he became more and more alive, his brain more and more active, and his conversation more and more scintillating By day he was a shadow of the man one could know at night. He was a great connoisseur of wine, and as all men of good taste know if there is one thing which gives as much pleasure as drinking really good wine, it is the giving of it to others who appreciate it. I always reserved my stock of 1884 *Johannisberger Schlossabzug* for Rantzau. After the revolution at the end of the first world war it was given to me by Princess Melanie Metternich as a signal mark of friendship and esteem.

Schloss Johannisberg on the Rhine, was originally the

property of the Emperor of Austria. After the Vienna Congress he presented it in fief to his perhaps all-too-loyal servant Metternich with the proviso that 10 per cent of the yield should go each year to the Imperial cellars. When the Austro-Hungarian monarchy ceased to exist a dispute arose as to who should now be entitled to this royal impost. It is a long story and out of place here, but thanks to Princess Metternich the wine ended in my cellar I remember Rantzau's enthusiasm the first time he tasted it "If Rhine wine is the king of wines," he declared "then *Johannisberger Schlossabzug* is the King of Kings." Fortunately this opinion was not expressed on the evening in question or we should probably have spent the rest of it listening to a duel between Max Slevogt and Rantzau over the respective merits of Rhine wine and that of the Palatinate. The inhabitants of the Palatinate feel deeply on the subject and they are prepared to go to the stake at any moment in support of their contention that the wines of the Palatinate have it. As well as being an artist, Slevogt was also a vintner and owned a vineyard in Neu Kastell in the County Palatine.

On this particular evening Rantzau was Dionysiac *par excellence* thanks no doubt largely to the 'King of Kings" His eyes sparkled and he spoke fluently and brilliantly Fritz Haber was sitting opposite him and drinking ten times as much no, twenty times as much as the aristocratic *gourmet*, and still remaining absolutely sober It was no besottedness that made the Nobel Prizeman drink like a fish. He had to take tremendous quantities of liquid to remain alive, and he was already a doomed man Whisky and soda was not a mere means of pleasure to him. He was literally drinking to stave off death.

My guests were unanimous in believing that, after all allowances had been made, Soviet Russia was working for an ideal against the capitalist materialism whose chief representative, even at that time, was the United States. Europe lay between the two under pressure from each side. One day she would have to decide for one or the other or be crushed between the two We were all of the opinion that in the last resort the principle represented by Russia would offer humanity a better chance of happiness than any society built on a material basis possibly could do

Rantzau's aim—he regarded it as his mission in life—was to bring about the closest possible friendship between Germany and Russia. He was a German, and therefore he thought Germany was entitled to the hegemony in this alliance, but nevertheless, his fundamental motive was not nationalistic, but idealistic, European. The main opposition to his efforts the opposition, in fact, which brought his whole work to nothing, was in the Wilhelmstrasse, where a powerful clique, the Bonner-Borussians, would have none of it. Stresemann signed the deplorable Locarno Treaty and everything Rantzau had laboured to build up was swept away

On the evening in question Rantzau sketched the whole extent of the damage to us. "The real object of my return is to tell them what blockheads they are, he declared. "There's nothing more I can do now He knew Russia thoroughly and he liked and respected the Russian people. Outward semblance did not deceive him, and he could see the tremendous progress the Russians were making in the teeth of enormous difficulties. He had worked patiently and systematically to realize his plans, and on the Russian side he had found a congenial spirit and partner in the Soviet Foreign Commissar Tchitcherin, and the two had become fast friends Rantzau was convinced of the essential honesty of the Russians and he never let slip an opportunity of defending them. Someone made a sceptical remark about their political and economic reliability Rantzau almost sprang up from his seat. He was obviously moved by honest indignation. "Give me one instance, he demanded "one instance only that could remotely justify such calumny" No one could.

Rantzau discussed the financial and commercial reliability of the Russians at some length. Although they were being asked for as much as 30 per cent interest on secured debt they had never in a single instance, however small defaulted on any of their obligations. He prophesied grimly the terrible consequences such wretched calumny and such perfidious attempts to undermine Russia's credit must one day have for Europe. Rantzau knew better than anyone the steadily accumulating bitterness in Russia, and he feared that one day it would be let loose in an avalanche of resentment. He

described in dramatic words the deliberate humiliations to which the Soviet Republic was being subjected. The Russians were cool enough and clever enough to swallow the insults, but it was only in the firm conviction that one day their time would come. They were prepared to sign any agreement, he declared, no matter how disreputable and sharp were the motives of their partners, provided only that it promised to help their cause in some way or the other The Russians were quite as well aware of all the swindling tricks which were being played on them as were the perpetrators themselves.

Rantzau knew that his policy was finished It appeared that after Locarno the German Government had been anxious to offer a pact of friendship to the Russians as some sort of compensation. Such patent dishonesty went against Rantzau's grain, and in any case, the whole policy of the Bonner-Borussian clique and its mouthpiece Stresemann was odious to him, and he made no secret of the fact to the Russians The last remnants of confidence the Russians may have had in Germany's honesty disappeared with the signing of the Locarno Treaty and gradually Russia's attitude towards Germany developed into one of suspicion and mistrust. Outwardly nothing happened at first. German teachers, instructors and foremen remained in Russia German inventions, German machinery and German finished and semi-finished goods were still bought and paid for There was no intention on Russia's part of breaking immediately with a willing and anxious supplier But German influence was more and more reduced, and when the time appeared to have come to put the finishing touches to the process, Russia was cleansed of Germanophile elements with utter ruthlessness and brutality If one scans the list of victims of the purge they can all be brought under the same general denominator pro-German outlook.

Rantzau was much too sensitive not to be moved by the mass misery that a fundamental social upheaval always brings with it, and his sympathy with the victims was genuine and his indignation generous, but he was far too intelligent to let this sentiment interfere with his admiration of the great work as a whole.

It grew late. Rantzau had emptied his heart. There was

something fascinating and compelling in the frankness and deep feeling with which he presented his case. Both Einstein and Haber in particular had taken a very active part in the discussion All of us, both scientists and artists, had learnt much from Rantzau. We felt convinced that the world need not fear Bolshevism, and that in the last resort good would come of it.

It was early morning when we parted, each with the conviction that the world was approaching the greatest revolutionary struggles of all times We have since experienced the first act of the great drama.

CHAPTER XII

THE INFLATION

REICH s CHANCELLOR LUTHER was a real caricature democrat. We had so many of them. I am not in a position to pass judgment on his financial abilities. In his own opinion he was a finance genius. I think he was the first man from North Germany to enter a post revolutionary Cabinet. The plump little man with the fat, featureless face never looked straight at anyone he always seemed to be looking for something he feared he had dropped. He was reminiscent of a village pastor or school teacher who had somehow found his way to town and felt a little lost. In appearance he was the honest but dull lower middle-class German to perfection. His clothes were always extremely practical and seemed calculated to last for ever a flannel shirt to save washing sometimes a white dicky over it a celluloid collar washable celluloid cuffs, ditto a loose ill-fitting suit of some extremely durable material hand knitted socks, probably made by his good wife and ploughman s boots with very thick soles. Attired in this solid garb Luther climbed to the highest office in the German Republic He was an honest, solid and reliable man and his soul must have been very much like his clothes, as proof against corruption as his heavy boots were against water His period of office was the most difficult any German Chancellor ever experienced it coincided with the inflation.

The inflation period in Germany has been described again and again from almost every point of view but still I think it impossible for anyone to have a true realization of its meaning unless he actually lived through it. It is in such a period that a man realizes the folly of money and the sound value of goods. Money is suddenly seen as nothing but a fiction, a convenient means of exchange, an outward expression of confidence in the honesty of those who guarantee it. This is not the place for a finance-technical analysis of the causes of the German inflation and, in any case, I am not the man to give it, but technical details to one side, patriotic malice played a great role in the background the desire to upset the reparations plans of the victors and rid Germany of her burden of foreign indebtedness. No wonder the value of the mark dropped into the bottomless pit. A billion marks for one dollar—and even then the owner of the dollar would have been well advised to keep it in his pocket. The situation was complicated by senility at the *Reichsbank, whose President, Arthur Gwinner certainly* a capable man in his day had reached the ripe old age of seventy five. The mark had always been a mark for him, a thing of value and he couldn t get used to the idea that the idols of his youth had toppled over Behind him were men who knew very well what they were doing They exploited the last vestiges of foreign confidence in Germany the naive belief that Germany really couldn t break down altogether Right up to the last foreign money was being speculatively invested in Germany to disappear with all the rest.

Psychologically the inflation riot was extraordinarily interesting and it was a long time before people realized that the grandiose figures which betokened their wealth meant just nothing It was not until the deflation that many noticed for the first time that they had lost everything In consequence the deflation made them dissatisfied and unhappy The German middle classes were ruined. First they lost their money in war loans and then the inflation swallowed the rest. After that mass unemployment prevented recovery despite all their persistence and industry They were the predestined victims of Hitler s propaganda. For the inferior mind faced with difficulties any sort of change seems welcome. 'I want to change

myself,' says the servant girl as sole explanation for giving notice to end her employment The despairing German middle class wanted to change itself, and it was prepared to follow any leadership blindly provided only that there was some hope of a change.

At last the inflation ended. The miracle of the so-called Rentenmark brought Germany back to financial stability How? I don t think anyone quite knows It really was a miracle, a psychological miracle. There was nothing real behind it. It always reminded me forcibly of the Rabbi preaching to his pupils in the seminary about the wonders of Divine Providence. To give them an illustration he told them the story of Mordecai, who found a suckling abandoned on the street and crying for food. In despair Mordecai prayed to God for help and God was moved. A miracle happened and Mordecai's breasts swelled with milk so that he could feed the foundling (incidentally this child was Esther the saviour of the Jewish people) But one pupil found God s methods a bit cumbrous why did he go to all that trouble when he could have given Mordecai money with which to hire a wet nurse? But the Rabbi wagged his head reproachfully It was the sin of pride to doubt the wisdom of God. "And he concluded triumphantly ' so long as God can settle matters with a miracle why should he waste money?"

The miracle of the Rentenmark was inspired by my friend and colleague Hilferding formerly a panel doctor in Vienna and later Finance Minister of the German Reich. It was put into operation under Luther's Chancellorship The basis of the new mark was a fictitious pooling of the national wealth. Every man of property had to accept a nominal mortgage of 5 per cent on his property for the good of the State. That was the guarantee, or shall we say the content of the new money The period of recovery set in supported by surplus foreign money which streamed into the country with speculative intent and at cut throat rates of interest. A tremendous boom quickly developed, prosperity returned and the Nazi movement went right under and was almost forgotten. It was saved from final dissolution and extinction by the world economic crisis which began in 1929 and brought mass unemployment with it.

During the four years it lasted the Nazi party succeeded in gaining power

To my good fortune I was one of those who foresaw the way things were going and I held fast to my own convictions. The result was that I and many of my friends managed to weather both the storms of inflation and the doldrums of deflation without any very considerable loss Not that it was at all pleasant whilst it lasted I think if a vote were taken to discover the most memorable experience of the German people in the first war and post war period, it would prove to have been the inflation. Before the new higher denomination notes were printed in masses, people would go to the bank and fetch their money in push-carts—and before they could spend it they would often find that it had fallen so swiftly in purchasing power that they could hardly buy their daily bread with it. Even small firms were desperately advertising for "Book-keepers, strong on noughts" The astronomical figures set a man's mind in a whirl and pursued him even into his nightmares.

No financial order or plan was possible in anyone's life, everyone did his best to turn what money he had into goods. 'The flight into stable values' the process was called On the other hand many people had to realize their possessions in order to live from day to day Every morning the Government announced the day's rate, and by the evening everything had doubled or trebled in price. It was no use reckoning fees in money food etc., was the only practical measure of value. I was very satisfied if at the end of a hard day's work I had been able to get enough bread butter and milk to keep me, my wife and our children from going hungry The estate of Princess Marie Radziwill owed me a balance of 15,000 marks for medical fees The executors paid it, but when they did it was the price of a postage stamp On one occasion I undertook a journey to Munich for a consultation in return for a smoked ham. Professor Casper and I carried out a delicate and difficult operation on an American banker for kidney trouble. The princely fee the pair of us received for our services amounted to five dollars Members of the American Finance Commission could and did, give banquets for the equivalent of half-a dollar Anyone who was fortunate enough to find a gold piece

forgotten from earlier and happier days could buy a small house with it. Daily the situation became more and more grotesque. The dam of confidence had collapsed and the waters of financial disaster swirled over the country sweeping away every hold. Until the miracle of the Rentenmark restored stability

The general lines of Germany's internal policy had been laid down by Erzberger The new rulers of the Reich had not courage enough to abolish the constitution of 1871 and introduce a uniform and centralized Reich s administration abolishing the particularist rights of the individual States altogether As in so many other important matters, they adopted half measures they left the federal States their little parliaments and a nominal independence. In some respects this was perhaps not altogether unwise. Oil and water don t mix. Nor do North and South Germany Catholic and Protestant, Silesian puddings and Swabian pies. Let them have their funny little ways, their tom thumb parliaments and their local prides, thought Erzberger but in really important matters the framework of the Reich must be strongly carpentered, so he unified the finances, the army the post and the diplomatic service—this last with the very definite idea of a Roman Nunciatur for the Reich as a whole with a Concordat in the background, because at that time the Vatican was represented only in Munich. With these reforms he deprived the States of any independence which would have proved uncomfortable for the Reich—but they didn t discover that until later It was easy enough to remodel the broken and defeated army into a centralized institution, and the postal services and the diplomatic corps proved no very great difficulty either but the finances—that was a different matter

I was often with Erzberger and the other builders of the Reich in Weimar and I certainly assisted them valiantly in reducing the cellar stocks of the old-established hôtel Erbprinzen The general political level of the whole National Assembly was very much that of a village council nevertheless, on the whole, and thanks to the patience and guidance of a handful of highly intelligent men like Erzberger and Preuss, it got through some very sound work. The Weimar Constitution,

an admirable document was the personal work of Hugo Preuss, an able and intelligent, though outwardly not very attractive personality

Almost all the German States were at the end of their resources and in favour of a formal declaration of State bankruptcy Erzberger exploited this catastrophic financial situation in order to deprive the States of financial control (it was the most powerful weapon they had) and place all financial control in the hands of the Reich. It was on a Monday I remember and I was in Erzberger's office when he dismissed a Secretary of State for declaring that his financial plans were a practical impossibility Calling in our joint friend Moesle, he instructed him to work out the plan in detail by the following Friday so that finances could go on. As he went out Moesle whispered to me 'Matthias has gone off his rocker It is impossible. I immediately in my innocence and ignorance of the difficulties, no doubt concluded a bet with Moesle that the thing would be done. Moesle lost his bet. He finished his job in time and the new Finance Plan providing for a centralized taxation system and Reich s control of finances went before the National Assembly and was adopted.

The reconstruction of the army was placed in the capable hands of Generals von Seeckt and Groener Groener was a Wurtemberger and an expert on railway affairs. On the old General Staff he had been in charge of mobilization and deployment. He was a man of medium height, fair haired, and with pleasant features He was a hard worker and even in peace time he was accustomed to spend eighteen hours a day at his desk. He had none of the one-eyed prejudices of the ordinary professional soldier and he showed a real grasp of civilian affairs in fact I think I can say he was one of the very few professional soldiers in Germany who realized that the army was there for the people, and not the people there for the benefit of the officers corps The fundamental idea of this civilian in uniform was to create a small people s army As the Versailles Treaty insisted that it should be no more than a hundred thousand strong, his aim was to recruit on the basis of capacity and intelligence rather than mere physical condition. He was not one of the "vons" he came of a good

Swabian middle-class family and he did not choose his collaborators according to the handle on their names, and that was all to the good.

But the War Minister of the Weimar Republic was Noske, a former sergeant-major and a grossly subaltern nature. With the willing assistance of this precious Social Democrat all sorts of organizations with all sorts of deceptive titles arose in which the old professional officers worked to keep the imperial army in being. Cadaver discipline was ingrained in Noske, and even as War Minister he stood to attention with the thumbs at the seam of his trousers when addressing his former superiors. He was the willing and criminal tool of the officer caste and he carried out the instructions of the General Staff, which continued to exist in secret in defiance of the Peace Treaty.

General von Seeckt was another highly intelligent man with thoroughly modern ideas. In 1922 he told me that he kept two men in each company whose task it was to report regularly on the spirit and opinions of the men. It was he who introduced university courses for officers, choosing the University of Giessen for this purpose. He was a believer in individual capacity rather than numbers. For this reason he abolished the major part of the old Army Rules and Regulations and put the training of the Reichswehr on an entirely new basis. He was the father of German Army mechanization. In the very early days the tank played a big part in his theories and at the Reichswehr manœuvres at Doeberitz and Jueterbog dismantled old cars were turned into imitation tanks. The fools laughed but von Seeckt knew what he was doing.

In his spare time he was an amateur of the arts and a man of charming personality. He was unprejudiced and open to consider any new idea or listen to any piece of advice. He was a gentleman of culture and wide education, very much attracted to the theatre, on which subject he had very definite views. Reinhardt was his personal friend, and so were many other dramatists and authors, including Gerhart Hauptmann. He moved freely in such circles and obviously felt himself thoroughly at home. His gaunt figure and lean monocled face were familiar sights in artistic circles, where his amiable, even jovial, nature made him very well liked.

The work of the Inter Allied Control Commission had never been performed very efficiently and before long it began to grow more and more perfunctory No one made any attempt to check the personnel figures of the Reichswehr to see that they did not exceed the treaty limits. The soldiery could go about their business again without let or hindrance, and the head quarters of the General Staff, the "big red building" in the Alsenstrasse, and the building of the War Ministry in the Bendlerstrasse, resumed their old functions in all but name. The old feudal names appeared again in the official Army Lists, and military experts of all kinds fell over each other in their corridors The civilian Ministries ruled nominally but in reality it was the military and they looked down in arrogant contempt on the civilian democracy because the civilian democracy looked up to the feudal military caste with servile adoration The military took the gifts and despised the givers.

Much the same development was taking place in the Foreign Office. Under the Kaiser there was a minor Consular official named Edmund Schueler He was a young man of talent and ability and an expert on Near Eastern affairs, but he was also the son of a simple artillery general in Spandau, a member of the middle class and not one of the old feudal aristocracy and therefore promotion was very slow He lodged many proposals and constructive reports, but the only time they ever received any notice was when they dealt with architectural matters, which the 'vons apparently and quite rightly felt were not in their line. Even under the Kaiser therefore Schueler succeeded in securing a commission for the brilliant architect Peter Behrens to rebuild the German Embassy in Petersburg Behrens was a man of imagination and ability though his fertile ideas did not always stand the test of time. Still as far as the German Embassy in Leningrad (as it afterwards became) is concerned I have always felt that its simple lines, well-proportioned façade and imposing granite columns made a very fine ensemble. To-day it still seems modern though we have in the meantime got used to the new genre it represents. However thirty years ago it was positively revolutionary all the more so because the neighbourhood of the Cathedral of

St Paul meant a certain disharmony in the whole square, and the new building gave offence to many old fashioned purists.

During the first world war Schueler was sent to Turkey in some subordinate capacity where he spent a deal of the time on his back with paratyphus. After the revolution democratic eyes began to look round for a bourgeois diplomat who was not a member of any of the duelling corps such as the Bonner-Borussians, and its countless imitators. They fell on Schueler and he was immediately promoted to high office and entrusted with the reorganization of the whole Foreign Office. It was there I made his acquaintance through Peter Behrens

Schueler was no doubt influenced by the bitter remembrance *of his own frustrated ability as a little Consul, whose way up* was barred by the inert mass of privilege, title and order holders. With vigour and determination, and no doubt much pleasure, he set to work to unify the whole Diplomatic Service. Under the republic the post of Ambassador or Minister was no longer to be an aristocratic and feudal privilege. It was to be open to anyone with the capacity to fill it, no matter what his origin. In principle of course Schueler was quite right. Germany's diplomatic representatives were no longer to be merely clever intriguers and social lions (in pre-telegraph and pre telephone days there was, no doubt, a certain justification for this) but thoroughly capable men who could at the same time (as a concession to the spirit of the day) further commercial relations between their own country and that to which they were accredited Thanks to the new political constellation in Europe the days of mere intrigues and the careful sifting of Court rumours were dead, but their representatives were not yet buried.

Schueler was right in theory but the theory went wrong in practice because his ambassadors, etc. were chosen primarily for their commercial ability (which, unfortunately most of them proved not to possess) and not for their general suitability The first set of democratic representatives sent out into the world by the republic were almost all failures. They were men of inadequate social forms, with little or no knowledge of languages and a hopeless ignorance of the character and history of the peoples to whom they had been sent. Even that

would not have been so bad if only they had been able to make up for it by their intelligence, but that was rarely the case. They did not even do much to further Germany's commercial relations—the very thing for which they had been chosen—because they usually favoured the particular branch of trade, industry or whatever it was, in which they themselves had formerly been active and with which, no doubt, they still maintained connections. In short, they seemed to imagine that they were commercial travellers rather than ambassadors. This I know is a harsh judgment, but I have a number of living examples before my mind's eye as I write.

In the circumstances the old powers in Germany found it easy to turn back the clock when opportunity arose, and the first man to go was the inaugurator of the whole democratic course, Schrueler himself. Immediately after Ebert's sudden death Simon, the President of the Reich's Court upon whom, by the terms of the Constitution the duties and powers of the Reich's President devolved until the election of the new President, dismissed Schrueler He went unwillingly but he had to go, and as a private man he turned to his old love, architecture.

Thus the German Foreign Office was reconquered by the Bonner-Borussians and the von Dircksen family and became once again a bulwark of nationalistic aristocracy and Prussian Junkerdom. Of course, the German Diplomatic Corps had capable, honest intelligent and even far-sighted men in its ranks, many of whom were opposed to Hitlerism, but unfortunately they kept their opposition safely locked up in their own breasts The diplomatic family which perhaps did most to corrode and destroy the decent traditions of Germany was the von Dircksens They were actively pro-Hitler and one of the female von Dircksens not only supported Hitler financially but was the first to introduce the man into polite society a social triumph which he would have found it impossible to achieve on his own When he came to power Hitler generously repaid the help he had received from the von Dircksens by giving them and all their relations, both near and far high and influential positions in his new Reich.

There were other diplomats in Germany There was, for instance, Carl von Schubert, one-time Ambassador in Rome.

He was a very good friend of mine. Whilst Foreign Secretary he, was far-sighted enough to see the threatening dangers and he did his best to promote a policy of peace with Germany's neighbours, but he and the few others like him were not influential enough, and with the arrival of Hitler and the wretched Ribbentrop all such honest endeavours came to an end.

Unfortunately there were not many deserving of praise not many even to whom one could grant extenuating circumstances in palliation of their offence. There was Stohrer a man of considerable formal culture, who used it to ingratiate himself with Hitler and to further the Nazi cause as Ambassador to Spain. The jurist von Gauss was another disappointment. A man of some culture and ability in his own right, as grandson of the great astronomer and mathematician Gauss, he should have felt the obligations of his position. He has not the excuse that he believed for one moment in Hitler's racial nonsense, or indeed, in any of the evil and ridiculous Nazi rubbish, but that did not prevent his using his juristic abilities to cloak Hitler's crimes with a pseudo-legality An altogether deplorable case of intellectual dishonesty and disloyalty to a high tradition.

CHAPTER XIII

JOURNALISM IN GERMANY

THERE WERE THREE main newspaper concerns in post revolutionary Germany Rudolf Mosse, whose chief paper was the *Berliner Tageblatt* Ullstein with the *Vossische Zeitung* and Simon-Sonnemann with the world-famous *Frankfurter Zeitung* They were all worthy representatives of the liberal democratic tradition The other big national newspapers, such as the *Berliner Lokal Anzeiger* of the Scherl House, the *Kreuz zeitung* and the *Taegliche Rundschau* declined greatly in importance after the revolution The same was true of the big provincial newspapers (apart from the *Frankfurter Zeitung*) such as the *Hamburger Fremdenblatt* the *Koelnische Zeitung* and the *Koenigsberger Allgemeine Zeitung* On the whole the German press

was well established and reputable, and its reporting was reliable and as objective as could be expected.

The period of corruption set in when the Nationalist Hugenberg bought up most of the provincial dailies with millions of his own money and many millions more put forward by Right wing political interests With this the House of Scherl (Hugenberg) again became powerful, but its organs were no longer newspapers in the formerly accepted sense, but mere instruments of nationalistic and monarchistic propaganda.

I was personally in close touch with the three big liberal democratic dailies with the *Berliner Tageblatt* by my friendship with its editor Theodor Wolff with the *Vossische Zeitung* through my friendship with Georg Bernhard its editor and with the *Frankfurter Zeitung* through my close relations with the family which owned it, Simon-Sonnemann. Theodor Wolff was what we liked to call an Athenian in cultural outlook and education, and a Spartan almost a Stoic, in character He was a man of middle height with silver hair pink cheeks a clipped moustache over a sceptical friendly mouth from which a lighted cigarette invariably hung He was always calm, and I never knew him otherwise even when everyone around him was showing obvious signs of excitement, even panic, in the many crises Germany experienced in those post war years. He was highly intelligent, judicially critical, unprejudiced and a man of great understanding and cool judgment. His leading-articles were more than day to-day journalism—though they were brilliant enough examples of that—they were of a high literary and cultural standard He was the foremost *Advocatus Democratiae* of the Weimar Republic. Liberal democratic principles were laws of the Medes and Persians for him and he would not budge one iota from them himself or countenance any compromise in others. I have more than once expressed my opinion that in the situation which arose in the Weimar Republic this noble dogmatism was a mistake. In the case of Theodor Wolff I can say to-day that it cost the House of Rudolf Mosse its existence—and democratic Germany her life. *Et si fractus illabatur Orbis impavidum ferient ruinae* In the end his thoroughly justified dislike of von Papen was probably in effect and unconsciously a help for Hitler

Wolff was more than the nominal chief of the *Berliner Tageblatt*, he controlled its policy without interference His colleagues were amongst the finest journalists in Germany With only one exception (pilloried forcibly by Heinrich Mann) they remained anti Nazi even at a time when so many in Germany were hurriedly changing their coats. Wolff's one failing (politically be it understood) was originally a virtue it was that orthodox and upright democracy which judged the world according to its own fundamental decency As one can readily see, where Weimar Germany was concerned it was a grievous political error Wolff was a firm pacifist and wholeheartedly in favour of a peaceable understanding with Germany's neighbours, and with France in particular He was no cunning and hard boiled politician, but a man of refinement and culture, more inclined to trust than mistrust.

I often discussed the Nazi danger with him. He could never believe that it really was a menace. He firmly believed in Germany his Germany and he was sure that decency would triumph in the end Even when I met him, as I sometimes did, in exile, he was still not prepared to admit that the German people as a whole were with Hitler For him the crime had been committed by a handful of reckless and ruthless blackguards. There was more than a little of the Egmont in his nature.

The House of Rudolf Mosse gave Theodor Wolff a completely free hand, but Georg Bernhard's position on the *Vossische Zeitung* was very different. There were five brother Ullsteins, and no editorial conference at the *Vossische* was complete without at least one of them to keep Bernhard in check. Georg Bernhard was a good journalist and he too was a convinced democrat who fought for democracy in Germany and peace in the world I should say that Bernhard was even more an economist than he was a journalist, and he was one of the first to recognize the danger of Germany's economic ruin through Nazism, whose tenets were propagated both by the party Nazi Feder and by the Nazi tool Schacht, who was then President of the Reichsbank. Bernhard fought the Nazis to the utmost and he was wholeheartedly hated by them, and in particular by Goebbels.

On one occasion he met Goebbels in the foyer of the Reich-

stag and in the hearing of a whole crowd of people he asked him how on earth a man who looked so much like a Jewish film actor could be such a fanatical anti-Semite Goebbels was not usually at a loss for words but that floored him. From that moment he hated Bernhard with a fierce and personal hatred, and it would have gone hard with Bernhard had he ever fallen into Nazi hands. When the Nazis came to power he had to fly for his life. I hid him in my sanatorium under a false name until arrangements could be made to smuggle him in the dead of night over the frontier into Czechoslovakia.

The brilliant paladin of liberal democracy in South Germany was the *Frankfurter Zeitung* founded by Leopold Sonnemann in the middle of the nineteenth century The democratic *Konigsberger Allgemeine Zeitung* had been founded by and still belonged to the Simons family The only daughter of Sonnemann married the only son of Simons, and after the death of the parents the two newspapers were in the same hands By far the more important of the two was of course, the *Frankfurter Zeitung* which was directed by Heinz Simon himself a highly cultured man greatly attached to the arts, which he did very much to further in South Germany in particular music The newspaper was as everyone knows, of the very highest standing Its editors, foreign correspondents and contributors were absolutely first class and the paper enjoyed an almost unique international reputation. However like so many other excellent newspapers it was unable to maintain its independence entirely in the days of large-scale capital and big financial and industrial interests The *Frankfurter Zeitung* slid into the orbit of large-scale industry and the I G Farben concern the great German dye trust, in particular That was really the beginning of the end for the staunch old democratic daily and when the Nazis came to power it finally surrendered to them Its editor Kircher at one time a reputable champion of democracy went over to the enemy and from then on the paper became a tool of the Nazi regime

I have been discussing primarily the democratic liberal press, but, of course, a newspaper like the Social Democratic *Vorwärts* also served the democratic cause in the wider sense of that term. The *Vorwärts* like its fellow Social Democratic organs in the

provinces, was most efficiently edited and produced, and it differed from the great democratic dailies proper in perhaps two main respects the mass of its readers consisted of working men rather than middle-class intellectuals, and, partly in consequence, no doubt, its literary level was not so high, though it was by no means negligible. Politically its language was much franker and more was said than the liberal press thought advisable, but, in my opinion, still not enough.

The Communist *Rote Fahne* and the near-Communist *Welt am Abend* (it was really a camouflaged Communist paper) spoke a very drastic language not that it affected the end result. The *Welt am Abend* an evening paper as its name signifies, was quite a brilliant journalistic performance It was thoroughly modern, well presented and well edited. It had an undeniable hang to sensation, but it was so well done that it counted both the simpler souls and their more sophisticated brethren amongst its many readers

The main Nazi organ was the *Volkischer Beobachter* Hitler's mouthpiece, and its cloacal nature assured it a large circulation amongst the nationalistic German middle class as soon as it was founded. Together with the *Berliner Angriff* Goebbels' personal organ, this journal prepared the terrorist atmosphere for years before the Nazis came to power That such thoroughly vile papers could find an increasingly large circulation was an indication of how far the general degeneration of moral standards had gone in Germany Once in power the Nazis destroyed German journalism and dissipated the last vestiges of its international reputation by a combination of monopoly thorough-going perfidy and sheer incompetence.

The standard of pre Nazi journalism was high from almost every point of view Naturally the papers regarded their main task as that of informing the public, primarily and necessarily politically but they also aimed (at least the reputable news papers, of which there were many did) at educating the public in the things of the mind, in art and in science and they did it very successfully Their contributors were outstanding in every field Prominent artists and scholars contributed regularly without fear of being reproached with rushing into print for publicity purposes. Far from opposing such co-operation, the

scientific and other associations encouraged their members to take part in what they regarded as valuable enlightenment work to inform the public of new scientific achievements or new developments in art and interest them in higher things than the everyday jog trot. In democratic Germany the good newspaper was a source of almost every kind of knowledge. Of course, there were sensational newspapers which cared for nothing but scandal in one form or the other but the more serious public rejected them with contempt. Even newspapers which catered for the masses of the people were usually of quite a high literary and cultural standard. In fact one can say that the general interest in art and science and their representatives which was alive in Germany in those days redounded greatly to the credit of the German people. But in the end those who spoiled so many good things spoiled that too When they came to power objective knowledge gave way to nationalistic prejudice, mystic nonsense and hateful distortion. The German press ceased to be an instrument for the dissemination of knowledge and education, and became an instrument of tendentious brutalization, it no longer served truth but the father of lies it no longer enlightened but besotted the minds of its unfortunate readers.

CHAPTER XIV

PRINCES OF THE CHURCH

IT WAS THROUGH my friend and patient Monsignor Teophil Klinda, Senior Canon of the Diocese of Gran, that I first came into contact with the higher Catholic clergy of Hungary I often visited the seat of the Primate of Hungary and I made many good friends there. As a Papal prelate Klinda frequently journeyed to Rome. On one occasion I went with him and had an opportunity (of which I took full advantage) of getting to know many of the leading personalities of the Vatican. Some of them have died in the meantime, and others have donned the red hat of the Cardinal. I found my relations with them very agreeable and by good fortune I have succeeded not only in maintaining but extending them right down to the present day

During my first visit I became friendly with Father Bricarelli, whom I have already mentioned as being the leader of the Civiltà Cattolica in Rome, a simple Jesuit priest, but a man of great capacity and influence, and one universally esteemed Thanks to his position his relations with the whole College of Cardinals were of the closest, and through him I was called into consultation when the aged Cardinal Oreglia di San Stefano fell ill I extended my stay and I did not leave Rome until he had thoroughly recovered. During the whole time I lived in the Cancellaria and breathed the authentic atmosphere of the Vatican. To make clear what I mean I can compare it only with the pure mountain air at great heights, with the horizon far away in the blue distance above the clouds. Such an experience is deeply impressive and extraordinarily elevating The values in the Vatican were those of eternity Time was not of the essence of the problem. If a thing did not succeed one day there was the next—or the following year Time was there limitlessly for confidence in final victory was supreme. There is no power in the world to-day which can trust its strength more confidently than the Catholic Church. If it is threatened from one side, new forces fly to its aid from another

The highest representative of the Catholic Church is His Holiness the Pope, but real power is in the hands of the College of Cardinals and its Deacon. The College is, so to speak, the Papal Cabinet. For this reason the Cardinal Deacon Oreglia twice refused the Papal election, and in the third vote the former Patriarch of Venice, Del Sarto was elected Pope Pius X. It was certainly not for health reasons alone that Cardinal Oreglia refused to become the successor of St Peter the position he already held was even more powerful.

Here lies, I feel the solution to the riddle of Catholic invincibility In this spiritual democracy everyone may live to the full limit, but not one step beyond. The limit is represented by the interests of the Church, and it is laid down strictly by the College of Cardinals, from whose verdict there is no appeal The cleverness of the Church lies primarily in its ability to adapt itself to the times and the developments they bring The Church is not guided by unbending conservatism or by any supine traditional routine. The higher a priest rises

in the hierarchy of the Church the easier it is to discuss the questions of the day with him. In such discussions there was no one from whom I learned more than from Oreglia the Magnificent, a man of supreme wisdom.

I have known a number of people in my life with whom I could never rid myself of a certain constraint, no matter how long I knew them or how often I came in contact with them. It is some aura of personality which prevents one coming too close to them, and it has nothing to do with respect, position or power. Amongst such personalities were General Ludendorff, the assassinated Hungarian *Minister President Count* Tisza, the Kaiserin Zita, and Cardinal Oreglia. Normally after a short time, and without violating the conventional distance, I have always recovered my nonchalance. All I had to do was to remember that the others wanted something from me and not I something from them. All my life that thought has been sufficient to maintain my self-possession, and on the whole, I have found that my attitude was approved rather than otherwise.

Cardinal Oreglia had to a very great degree the "aura" to which I have referred. The Cancellaria had a very long front, and when all the doors were open the reception and other rooms could be seen in one great vista. The Cardinal sat in the last room on the right, usually in an arm-chair. *He was approaching* ninety then. Looking over the top of his glasses, for he was far sighted, he would watch the visitor coming towards him until finally he arrived. You know already when you enter the

observed his *vis-à-vis* every gesture, every word was noted. Even at that advanced age the eye was still keen and seemed to extract everything His Eminence desired. He did not talk a lot and the questions he asked were brief and to the point, and he was a very careful listener. As a patient I found him obedient and grateful. He enjoyed life and he wanted to go on living. He had plans for the next hundred years. I think it is one of the characteristics of really great personalities that they never reckon with their age and continue to make their plans as though for all eternity. Their ideas and conceptions are never limited by the brevity of their own lives.

I succeeded in winning the Cardinal's confidence and friendship. Not only did he secure me a private audience with the Pope but he arranged for the two Physicians-in-Ordinary to his Holiness to call me into consultation. One of them was Lapponi, who saw the Pope daily. He was an excellent doctor with great practical experience and knowledge, and he had been attached to the Vatican in a medical capacity for many years. The other was Marchiafava, a famous malaria investigator and a pathological anatomist. Such a combination is an excellent one, and it should be used more often than it is. I have always very willingly consulted a pathological anatomist whenever there was any question of a tumour or organic disease, and I have found their ideas as to how a disease will conduct itself, how it is likely to spread, and what organic changes are likely to result in consequence, always very valuable and illuminating—the sort of ideas one would not have received from other colleagues. Marchiafava was a scientist of wide knowledge and education, and thus an excellent complement to the practical Lapponi.

Pius X made an impression of great simplicity and goodness on me. In appearance he was a typical village priest, but his natural dignity was compelling. As Pope he was just as he had been as pastor amongst his beloved Venetians. No priest was ever better loved in Venice than this former Cardinal del Sarto. On the day he left Venice to go to Rome for the Papal election vast crowds accompanied him to the station cheering and shouting "Good-bye for ever!" It was the expression of their hope that he would be elected, for they knew that if he were he

would never return to Venice, for the Popes still lived in voluntary imprisonment in the Vatican

The Pope was that type of sufferer from metabolistic disorders whose gout preserves life rather than threatens it. He was not particularly strict in following his regimen, but at least we were able to control his diet closely According to long-standing tradition the Pope never eats in company but always alone, and so the control was very easy The isolated life he was compelled to lead was a real burden to him. He loved his sisters and his nieces but they had to live elsewhere in a small house on the Piazza San Pietro where they would talk willingly to visitors of the youth and eminent career of the Pope. All that was now left to them of their family life was a daily visit, always at the same time, clad in simple black dresses and wearing black lace mantillas When they came they were invariably received with the Salute of Princes by the Swiss Guard

I went to the Vatican every year up to the outbreak of the first world war and I still possess and treasure many mementoes of those agreeable days, and in particular the great medal which was struck by the Vatican to celebrate the issue of the famous Papal Encyclical against Modernism in 1909. Modernism was flooding over Europe at the time, dangerously it seemed to the Vatican, threatening to sap the foundations of traditional morality It was time to raise a warning voice against excesses, and Pope Pius X, deeply anxious for the well being of his generation and of those whose souls were entrusted to his care as Vicar of Christ, issued his famous Encyclical It is not for me to say what practical good it did. Modern ideas and customs had come to stay and to-day few of us see any harm in one-piece swimming-suits for ladies foxtrots and tangoes lipstick, shorts and smoking, though at that time they filled many good people with profound misgiving As far as I know all that has remained of the regulations laid down in the Encyclical is that women may not enter Catholic churches with bare arms.

Many things have changed in the world, but I think that little can have changed in the spirit and internal structure of the Catholic Church. The principle of absolute obedience and the readiness to sacrifice everything for the One True Church have remained unchanged One or two instances which go to

support my view have come to my notice. There was one Prince of the Church whose name shall not be mentioned here. Apart from his high office he was the possessor of a large private income and he lived in some style. His household was managed by a capable and very attractive young woman who also insistent rumour would have it, assisted in lightening the burden of priestly celibacy The Bishop for such he was, fell ill, and his good Margaret nursed him for years, a devotion for which the patient always expressed the sincerest gratitude. The sickness, however proved fatal in the end, and when the testament came to be read there was not one penny piece of all the considerable fortune for her but there was an explanation in lieu which declared that His Grace could not take it on his conscience to deprive the Church of the least mite of his fortune.

Another and rather different instance of this great submission to the Church came to my notice one morning when I was invited to take lunch with the then Papal Secretary of State, Cardinal Mery del Val. Before the door of the dining room knelt a distinguished old lady and gentleman When the doors were flung back by uniformed lackeys the Cardinal came forward and offered them his hand. They kissed his ring on bended knees and only then did they rise and go in with us. I was then presented to the Cardinal s father the President of the Supreme Spanish Court, and his mother The two grey haired parents had waited patiently on their knees to be received by their own son.

On another occasion I was called to the Prior of the Church of Saint Anthony in Padua. I found the sick prelate in a room so small that I had some difficulty in getting between the bed and the wall to examine him. My diagnosis was severe diabetes, and I suggested that he should go to Carlsbad to take the waters there. He declared immediately that it was quite out of the question he couldn t afford it. This was the man through whose hands tremendous sums passed without control, namely the offerings in church boxes of countless lovers fiancées, child less women, etc all over the world who pray to Saint Anthony for the fulfilment of a wish and then make a money contribution. Most finance institutes are glad enough when they can find someone reliable to manage money which is checked and here

was a man who controlled tremendous sums of unchecked money—and yet he couldn t afford a journey for the sake of his health. The Church came first his health afterwards. This is typical of the million pillars which carry the Catholic Church safely through all convulsions. It is immaterial whether the observer believes or disbelieves in the dogmas of the Church, the edifice remains worthy of admiration and awe.

The long days I spent in Rome were partly filled by special studies I was able to make in the Vatican Thanks to Father Erle, who was at that time in charge of the Vatican Library I was able to examine the unica and use the rooms not open to the general public, where I studied and made copies, of the Raphaels. I think it must have been a real sacrifice for him to leave his position and take the Cardinal s hat. Apart from Harnack, the great evangelical theologian, and Director of the State Library in Berlin, I never met anyone with such enormous bibliographical knowledge as Father Erle.

The first world war loosened my relations with the Catholic Church, but good fortune prevented their entire severance. I have said that in Berlin I was in charge of the Hospital of St Francis and that our Chaplain was Monsignor Dr Frintz, my very good friend At that time the Vatican was represented only in Munich. However a Concordat was to be signed with Prussia and a Nunciatur established in Berlin, Monsignor Giovanni Pacelli was entrusted by the Vatican with the regulation of Catholic status in Prussia. Pacelli had no official residence and so our Hospital considered it a great honour to have him as a guest, and he remained with us for years until the official building of the Nunciatur was ready on the Cornelius-Ufer The Nuntius said Mass every morning in our little chapel, and my acquaintance with him developed into good friendship. He left Berlin to return to Rome as a Cardinal and Papal Secretary of State. Finally of course, he was elected Pope He was a truly holy man of great modesty of character a fine personality of keen intelligence and wide human sympathy I sent him a respectful message of congratulation on his election to the Chair of Peter and his friendly reply showed that he had not forgotten the years he had lived with us in the Hospital of Saint Francis.

CHAPTER XV

WILHELM II

THE FIRST TIME I came into contact with the House of Hohenzollern was when His Royal Highness Prince Eitel Friedrich went down with pneumonia. The great Kraus was called in and he took me with him as his assistant. All I did apart from taking the royal pulse and controlling the royal temperature was to lend increased solemnity and importance to the royal case—at least, I hope I did. I certainly tried and I felt very important myself. I did my best with the pulse and the temperature, but no matter how many times I checked they just wouldn't come into any proper relationship with each other and the case the pulse was much too high. According to my text book of internal medicine this was a most sinister phenomenon. Kraus was as much puzzled about it as I was, and for a while we were at a complete loss. Then Kraus got the brilliant idea of taking the pulses of all the other princes and princesses, and the mystery was solved They all had pulses varying between 90 and 100 instead of the average 70 The Kaiser also had a very high pulse and retained it until his declining years.

Prince Eitel Friedrich recovered under our ministrations, and as there was very little to do in the Royal Household, Kraus was rarely called in. The Kaiser was in regular treatment for festering mastoids, but the doctor in attendance was, of course, a specialist. Apart from this chronic complaint the Kaiser was a healthy man and there was nothing really wrong with the Kaiserin either though she tended to take too much thyroid gland extract for slimming purposes, but at that time she did not suffer greatly with blood pressure. It was only later on in exile that it became aggravated and finally caused her death.

I never saw her but I heard a lot about her from first-hand sources. She was a deeply pious woman in the old funda mentalist sense. When her first grandchild was born a wet nurse had to be found. Naturally the greatest care was taken in choosing one, and many were rejected for this or that reason, before a satisfactory one was at last found in the Spreewald

which is the traditional home of Germany's wet nurses. The girl seemed to be in every way desirable—until the Kaiserin began to make investigations, and then it came out that the healthy peasant lassie had obtained her qualifications as wet nurse by extra marital relationship. That wouldn't do for the Kaiserin at all, and the girl was sent packing.

Progressive minds at the German Admiralty had introduced prophylactic measures into the Navy against the spread of venereal diseases, and the results were excellent—until one day the Kaiserin heard about it and on a visit to Kiel she dressed down the dismayed Admirals for encouraging immorality. The measures were then withdrawn and the field left to the gonococcus and spirochæta—with the inevitable results. For the Kaiser she was something like a collar stud: not of much value, but essential.

During a conversation on the golf course at Wannsee with the Crown Prince, or former Crown Prince as he was by that time, he said to me: 'You know, Plesch, if my father had kept himself a clever and sophisticated French cocotte on the quiet, the world would have been spared all the trouble and Germany her disaster.' I don't know whether it would have helped all that much, but there it is as the opinion of one who was in some position to judge.

I got to know the Kaiser's second wife, Hermine, when she was still Princess Reuss. I met her in the house of Princess Marie Radziwill. In her first marriage Hermine was the wife of a second son of Prince Carolat, whose estate lay near Zuellichau. Estates were all entailed to the first born son in Imperial Germany, and so it was here. Second and younger sons got little. Hermine was a Princess, but she had very little money, which was all the more a pity for her because her husband was an ailing man and needed much medical attention. She was a good wife and a good mother to her children. During the lifetime of the Kaiserin Viktoria and before she herself had become a widow she belonged to the Court, and was therefore well known to the Kaiser. In the loneliness of exile and himself a widower the ex Kaiser married the widowed Princess despite his advanced years. The marriage led inevitably to a great deal of criticism, but Hermine lived it down by her own character

and efficiency She was a devoted companion to the Kaiser during the last ten years of his life, and she did much to make his exile easier to bear

The experts disagree as to whether that exile was ever necessary This much is certain in October 1918 Germany's responsible Generals lost their heads and panicked, not one of them was ready to defend his Kaiser and the Kaiser's personality and character was not one to take up a struggle whose outcome seemed doubtful For what my personal opinion is worth, I think that nothing serious would have happened to him in Germany from the Revolution. I feel sure that he would have been allowed to live in retirement without interference. Such an attitude would have put the victorious Powers in a quandary I am sure they had no intention of bringing him to trial, and were only too glad when Holland refused to surrender him. And if they had tried him the sentence could hardly have been worse than exile in Haus Doorn.

Through my good friend Albert Niemann, whom I got to know when he was Staff Major of Falkenhayn's Army Corps, I learned the intimate details of the last critical days and hours before the abdication and flight. Niemann was a fine soldier and an upright man of philosophic disposition. Towards the end of the war he was a Staff Officer at Ludendorff's Headquarters, and it was his task to act as liaison officer between the High Command and the Kaiser to whom he reported daily on the war situation It was he who accompanied the then ex Kaiser over the frontier into Holland His description which he set down in a book which has never attracted much attention, certainly puts the Kaiser in a more sympathetic light than his Generals.

Personally I have never had the impression that the ex Kaiser suffered very much from his Doorn exile. The one-time feared and hated "Ruler by the Grace of God" had become an Ibsen figure. He continued to fill in his time just as before with affairs of State" and no one disturbed his belief in his "Mission" as God's chosen. His days unrolled in the same old way according to the same old schedule, and the few around him continued to provide an atmosphere of loyalty and devotion The Kaiser's programme was always arranged to the

minute, and so it continued to be in Doorn where the Lord Chamberlain's Office functioned in the same old way The civil military and naval chiefs made their reports every day as usual. The world political situation was discussed and audiences were granted The old Court ceremonial was just as it had always been The guests at the royal table were chosen as carefully as ever Nothing was missing and the old Court household was copied in every possible particular—except that it was like looking at the stage through the wrong end of the opera glasses

The very house was a castle by courtesy only Most of the permanent staff and Court officials lived at the Gate House. From there one entered into a walled estate of perhaps twenty acres with lawns and clumps of trees. In the middle of the estate was a brick house with sandstone facing which did duty for a palace. The façade was perhaps a little over 60 feet long and there was a first floor and attics. That was all. Inside it would have been impossible to lose one's way Everything was too clear at first glance. To the right of the hall was a small reception room and to the side of that a small saloon. At the back of the house, running its whole length, was the dining room, quite a small hall. Upstairs were the apartments, if such they could be called of the ex Kaiser and his wife. The furniture had come from the Potsdam palaces It had been chosen with very little taste from the great accumulation of furniture, art and other treasures there. Half-a-dozen French styles were mixed up and the tapestry went as far as modern Beauvais. The choice had been made for pomp rather than nobility One thing at least I can vouch for, the Kaiser had no artistic taste whatever or he could never have lived in such garish surroundings The only really beautiful things in the whole place were a few paintings from the Royal Galleries, which included a Watteau or two.

The guests assembled in the larger of the two reception rooms together with the Courtiers in attendance and right on the dot the ex Kaiser appeared accompanied by the Kaiserin" Then we all trooped into the dining hall. The chief article of decoration was a life-size portrait in oils of the Kaiser in field-grey Field Marshal's uniform with the Kaiserin Auguste

Viktoria. The ex Kaiser sat at the middle of the tables which was laid with Berlin porcelain and English silver he on one side, she on the other The meals were very frugal. Hermine handed me some hot buttered toast, and when I wanted to pass it to her daughter who was sitting on my right, she refused and told me that the buttered toast was for guests only The remnants of the mid-day meal were invariably warmed up and served in the evening This sort of Spartan frugality was typical of a good bourgeois but not very well-to-do German household It was rather difficult to understand it in Doorn for the Kaiser was a very rich man. His fortune has been estimated at something like twelve million pounds, of which the revolutionary Government did not sequester one penny piece. This restraint was due chiefly to the Social Democratic Minister of Finance, Albert Suedekum, who has often told me how hard he had to battle for the principle that private property should remain inviolable against the Conservatives who were anxious to get their hands on some of it. It's a strange world.

Of course, the Kaiser had only the income and was unable to touch the capital. And Hermine had to be provided for after his death, but even so the interest on something like twelve million pounds ought to have made both ends meet without that rigid economy at the table

Hermine was capable and ambitious. She looked after the old man devotedly and attended to every detail of his life, doing her utmost to make the whole show as majestic as possible. It was easy to see, too, that he followed her guidance willingly and always took the discreet hints she gave him. "His Majesty" I must say quite often fell out of his majestic role and behaved like a schoolboy though I think that was perhaps the most sympathetic trait I observed in him. His clothes were often comic. I remember him one morning in a grey suit with blue criss-cross stripes, a very loud tie of some bluish-mauve material, light tan shoes and multi-coloured ringed socks. He had a very simple, schoolboyish sense of humour and would laugh uproariously at funny stories. An example of the sort of thing he found highly diverting was the question "What is the difference between an optimist and a pessimist? He would ask this question frequently very often of the same person, and when

they politely told him they couldn t even guess, he would slap his thigh and declare with great glee 'You see, an optimist keeps his trousers up with a belt, whilst a pessimist wears a pair of braces as well—just in case, you know Whereat the laughter would be most hearty It was interesting to note that he usually spoke English and seemed to prefer it and whilst his German came in rather jerky sentences his English was very fluent.

Seen at a distance his appearance was deceptive. He looked quite broad and martial, but when you got nearer you discovered that he was no more than middle height and not at all a powerful figure. He was a fine-looking old gentleman though, with his wavy white hair his clear blue eyes and his carefully tended pointed beard. He had a real passion for hearing himself speak. I should think he was the worst listener of his time. His feeling of complete superiority to everyone and everything around him, coupled with a consciousness of his great mission, made it imperative that he should know everything Long long before the first world war and the revolution there was a very popular saying in Germany 'The good God knows everyg of course, only Wilhelm knows it all much better' I have spoken to many people who came into close contact with him, and they all say the same thing he never listened to the end of any report, but interrupted with his own opinion long before the speaker had got to the point, and after that it was the devil s own job to move him. The referent had to listen humbly and swallow his own arguments even at the risk of bursting Not that Wilhelm was a fool he grasped things quickly and what he said was often sensible enough even when it was wrong His language was by no means fine, but often very unceremonious and even vulgar

He liked best to talk standing up and then his hearers would be treated to a recurring embarrassment. He would pick up his withered right arm by the sleeve and fold his normal left arm over it to hold it in place, but before long in the heat of the conversation it would slip out and fall helplessly to his side. Then he would seize hold of it again by the sleeve and drag it up impatiently and hastily something like an irritable nurse with a fractious child Every time this happened his face would

darken angrily but once the useless ballast was safely tucked away again it would clear and resume whatever facial aspect suited the conversation. I discussed this point with Emil Ludwig, who attached great importance to the Kaiser's physical deformity in his biography "Wilhelm II" Perhaps Ludwig went too far in insisting that the crippling of a vain man holds the key to the character of a historic figure, but there is no doubt that in the case of the Kaiser his development and his fate were partly decided by this misfortune. That Byronic melancholia which played such a literary role was undoubtedly derived from Byron s club foot, on account of which he had been spoiled and privileged from childhood with the result that he felt like an outcast. One can never be sure exactly what role a physical deformity of this sort will play in a man s life. Richard III was a hunchback. Listen to him (or to Shakespeare, it is unimportant)

"I that am curtail d of this fair proportion,
Cheated of feature by dissembling nature,
Deform d, unfinish d sent before my time
Into this breathing world scarce half made up
And that so lamely and unfashionable
That dogs bark at me as I halt by them.
And therefore I am determined to prove a villain."

The ex Kaiser certainly did not go in for melancholia, and he was not a villain either in the ordinary sense, rather a good husband and father according to his lights, but perhaps his deformity his consciousness of a defect compensated itself in the attitude of superiority he always displayed, and urged him on to his notorious boastfulness, and to his frequent table-smiting with the fist of his whole arm. When he was young he loved to show himself in heroic and martial posture, preferably on horseback at the head of his troops. But despite shining helm and upturned moustache it was very difficult he was a cripple of medium height and even then of no athletic figure.

His deformity was not an inherited one, but the consequence of sheer bad luck in an operation to save life performed by the famous gynaecologist Martin. The Kaiser was a breech birth, and in the withdrawal the right arm got caught between the

skull and the bony structure of the pelvis and the elbow had to be broken in fact, it was smashed beyond hope of recovery In later life the Kaiser was extremely vindictive and never forgave poor Martin, though the man saved his life at the expense of his arm.

I have said that the Kaiser was no villain as a private individual, but, of course, a Kaiser is not a private individual, and in his position a lack of proper responsibility (even without any criminal intent) can prove in effect the same as a crime. The Kaiser most certainly lacked this sense of responsibility and millions of innocent men and women paid for it with their lives As a private individual Wilhelm II was beyond all doubt what is usually described as an honest, God fearing man, but as Kaiser he was equally certainly a most malignant influence. The line between guilt and innocence between culpable neglect and inadequate intellect, is always very difficult to draw The Kaiser was no fool He was quite honest in that he was firmly convinced of his mission—but the people who surrounded him cannot be exonerated from guilt.

Whilst I was at Doorn the Kaiser gave me a memento of my visit in the shape of a book containing the favourite sermons he had preached in the little chapel of his house on Sundays I read them with interest and I was impressed by the deep religious feeling which informed them, almost to the point of fanaticism. The moral and ethical standards of these homilies are high. Nothing in them sounds false or hypocritical. They give some idea of the source from which he drew the strength to bear his exile with equanimity

In his attempts to justify himself before posterity he has not hesitated to blame everything on to other people. All bad losers do that Many people declare that to the end of his days the Kaiser was firmly convinced that he was a much misunderstood man and that a great injustice had been done to him.

It was Wilhelm II s fate to have been born in the atmosphere of Bismarck s megalomaniac policy without possessing the sure hand and keen eye of the master for the limitations imposed by circumstances

CHAPTER XVI

PRINCESS MARIE RADZIWILL

THREE BIG GERMAN estates lay comparatively close to each other that of Prince Reuss and that of Prince Carolat, both near Zuellichau and that of Princess Radziwill at Kleinitz. It was quite natural therefore that these three families saw a great deal of each other and there was a long-established friendship between them. The centre of the society was Princess Marie Radziwill, the daughter of the French Marshal Boni Castellane and a Talleyrand. Marie had married Prince Anton Radziwill who was adjutant to Kaiser Wilhelm I and accompanied him into the field during the Franco-Prussian War Every day throughout the war and the absence of her husband the Princess received a letter from Prussian Headquarters with all the latest war news, uncensored and straight from the scene of action. Her diaries were full of many intimate matters of great historical importance

She had four children. She was indifferent to the first-born son, Michael, but doted on Stasch, the second son One daughter married Count Roman Potocky the owner of the Lancut estate in Austrian Poland and the fourth child, also a daughter married the Count's brother Joseph Potocky who possessed wide lands and big sugar factories in Russian Poland. It was a very international family with connections all over Europe. When the first world war broke out Michael was married to a Belgian Stasch was Adjutant to the Grand Duke Michael one daughter was in Russia, the other in Austria. And the rest of the closer relations of the family were in France and Italy For whose victory was Marie Radziwill to pray?

She was over eighty when I first met her and she lived in a Palais on the Pariser Platz which belonged to the Guards and had been left to her use for life, though from time to time she retired to her Kleinitz estate for rest and recuperation. She was loaded with worldly honours and titles, but she was not a happy woman. She did not get on very well with her eldest son Michael who would inherit the estate and the title, and she was passionately fond of Stasch, the second son. Her love for him was the one great emotion of her declining years. The old,

Radziwill estate was part of the Duchy of Sagan, the Nerwitch estate, which was inherited by the first born son, Michael, and consisted of about 800 000 acres on Russian territory For the second son, her beloved Stasch, she was determined to create a second and even larger estate of a million acres in Volhynia. For this she had to obtain the permission of both the Kaiser and the Czar because the land in question lay partly in Germany and partly in Russia. She realized her ambition shortly before the outbreak of the first world war and Stasch had his estate and incidentally the only elks left in Europe—perhaps the last in the world unless one counts the American moose.

During the war the Princess was not short of respectful admirers, but she felt very lonely and the war literally broke her heart. The most devoted of all her visitors was the Spanish Ambassador Polo de Barnabe, a splendid Cervantes figure of real grandeur and old world courtesy But by that time Princess Marie was living in the past and writing her memoirs—all for her beloved Stasch. During the war she was kept under surveillance by the German police and for this reason she gave me her manuscripts, her diary and the letters of her dead husband. I entrusted the German author Max Schoenau, who had made some reputation for himself by the translation of French books into German, with these various documents with a view to their translation. After the death of the Princess the German authorities confiscated the original letters of Wilhelm I's former Adjutant, the diary the manuscript of her memoirs and the half finished translation as well and I could never get to hear anything more about them. A very great pity but perhaps they will turn up again one day The diary ended with the annexation of Alsace Lorraine after the Franco-Prussian War I remember its last words very well 'To hold is not to own ' They were prophetic

Marie Radziwill never became German in anything but technicality She came from Provence, and the atmosphere of Kleinitz was wholly Provençale. In a strange country she created for herself the surroundings of her origin She was a dominating nature dignified, noble and hard. To me she was the embodiment of history—history from the inside. Sitting round the open fireplace during the long winter evenings at

Klemitz, it was fascinating to listen to her as she described the intimate details of European Court life with her inimitable cynicism and humour So great was her ability to re-create the past that to listen to her was almost to experience the things she was describing

She was a very clever and intelligent woman, and yet in some respects she was naïve and trustful, almost like a child or perhaps better like an aristocrat. Having read a prospectus from an Italian firm on the enormous profits to be expected from the planting of quick-growing poplars for paper making she planted her estate with forests of poplars *pour faire de l'argent pour Stasch* In twenty years he was to have great paper mills to add to his income. She also purchased Provençale antiquities, and was delighted at the bargains she made at the expense of the ignorant dealers who sold them to her far below what she knew was their real value—except that they were clever fakes. As a Provençale she was cunning, but a Provençale dealer was even more cunning than a Provençale.

Princess Marie Radziwill was a strange and fascinating figure, with her aspirations which could never be realized her dissatisfactions with the world around her and her love of power She was a figure from another and bygone world, like some half forgotten character from an aristocratic Gothic novel She was one of the last great representatives of a dying caste Such a character fitted into Central Germany indifferently well, but just as she was, she was liked loved and admired by those who came into contact with her including Hermine Princess of Reuss. Princess Marie was an aristocrat, and it was this society of her peers which made life half way tolerable for her

The aristocracy is the oldest *internationale* Its caste system extends horizontally through all the civilized countries of Europe. It holds together and forms a sort of social super structure over all civilized peoples. Its solidarity is more secure than that of any socialist international, and it defends its privileged position everywhere and over all frontiers. After and even during the great and bitter national struggles the aristocracy in the victorious countries always succeeded in protect ing their confrères in the defeated countries and tempering the bitter wind of defeat. The aristocracy knows well that the

weakening of its position anywhere is the weakening of it every where. The aristocracy is primarily international and national only secondarily For this reason one very seldom finds embittered Chauvinists in its ranks This nationalism with reservations, which is quite compatible with true patriotism, has spared the world much bloodshed but it has hardly furthered social development.

After the first world war Germany was exhausted both physically and spiritually and at this stage certain aristocratic circles in Germany were in favour of placing the country under military control as a demonstration of their honest desire for peace. I was a guest of the Reichs-Count Friedrich Schaffgotsch in Schloss Warmbrunn together with the leading aristocrats of Silesia when the subject came up for discussion, and they were all in agreement with a suggestion that the French and German General Staffs should exchange representatives in permanence. This measure would of course have tended to strengthen both countries, bring them together and limit their armaments There would have been no national humiliation in a mutual exchange of Staff officers. Naturally the thing was by no means as simple as the Silesian aristocrats imagined for thing it would have disturbed the balance of power in Europe in favour of the two Powers concerned and that would have aroused strong objections in various quarters However the point I am making here is that these German aristocrats were quite in favour of international control. The nationalistic lunacy was not encouraged by them. Their greatest anxiety was to defend their privileged position against proletarian encroachment. Against the Marxist slogan 'Workers of the world unite they favoured Aristocrats and capitalists of all countries unite

The Warmbrunn estate consisted of some 150,000 acres, a mere remnant of the once enormous Schaffgotsch possessions. After the treachery of Wallenstein and the conclusion of the Treaty of Pilsen the Count Schaffgotsch of the day lost his head and two-thirds of his possessions one third was presented to Prince Hatzfeld another third to Prince Pless, and the Schaffgotsch heir was left with the remaining third. In the thousand years of its existence, apart from the one regrettable—and no

doubt regretted—lapse of the Count who lost his head the Schaffgotschs *were always loyal servants of their masters, and* devoted Catholics who used their large income from land forest and, in later years, industry to further the cause of the Church. The remarkable finding of a thousand year-old ostrich egg on the estate impelled the Schaffgotschs to interest themselves in ornithology *noblesse oblige* with the result that an ornithological museum unique in Germany was built up in *Warmbrunn Its collection of eggs is the biggest and best in* Europe. It was here that I studied the marvellous protective mimicry of the wicked cuckoo for each type of nest used by the interloper there was the appropriately coloured and flecked egg-shell.

Until the coming of Hitler life in Schloss Warmbrunn went on more or less unchanged for generations. The hunts were remarkable At a signal blown on an old horn something like two hundred members of the hunt of both sexes would form ranks in accordance with a discipline and ceremonial unchanged since the Middle Ages The estate spread along the Silesian mountains up to the crest, and its stag hunt was one of the best in the country It was also renowned for its woodcock. This was what I enjoyed most getting up early in the morning, sometimes at three o clock, and setting off to slaughter the poor wretches at roding time, the height of their lives. It was thrilling but I always had rather a bad conscience it seemed a bit mean.

Schloss Warmbrunn maintained its old mediæval customs with as little change as possible for instance the drinking water was fetched from a source four miles away and brought back by donkey The tower watchman supervised the whole business of loading and transport with a telescope. About a century before the old castle had been gutted by fire but fortunately the fine library and the collections had been saved The incunabula and unica in the library were alone sufficient to make it renowned.

I have had the opportunity of visiting quite a number of old castles, including several in England Of course there are very *few on the Continent which can compare in age and historical* importance with those in England but the one I liked best of all was Schloss Oberglogau It was a Wallenstein build-

ing with four courtyards something after the style of Peterborough Castle the home of the Earl of Exeter I have long been an intimate friend of the last owner Reichs-Count Hans von Oppersdorff and his family His mother was a Talleyrand and his wife a Radziwill. There were thirteen children of the marriage, and although Hans was a hereditary member of the Prussian Upper House his heart was divided between France and Poland, and the atmosphere of Schloss Oberglogau was a mixture of their two cultures Everything was authentic there, including the fifty *holograph Wallenstein letters in the library* and the sonata MSS of Beethoven, who had composed them whilst staying there and dedicated them to his patron. Hans was a perfect product of classical Jesuit education. I owed much to him—something of the art of *savoir vivre* for one thing He hated Prussian militarism from the bottom of his heart, and in the end it cost him the family estate, the castle—and his passport. To-day he is formally French as well as by inclination.

CHAPTER XVII

THE DIPLOMATIC WORLD

THE DIPLOMATS ARE in a class of their own At one time they had a high reputation for skill but a low one for honesty Truth was not thought to consort with them frequently and Stubbs wrote frankly As diplomacy was in its beginnings, so it lasted for a long time the ambassador was the man who was sent to lie abroad for the good of his country' When diplomats spoke it was only to conceal their thoughts In these days of swift communications, overseas and overland lines cables, telephones and wireless the task of the diplomat has changed to some extent Many of them for all their feeling of importance, are no more than the formal messengers of their governments, and there is little need for them to talk. I have known many diplomats in my time, and few of them spoke freely but those who did usually had something to say and what they said was worthy of note Generally speaking they were men who really represented the governments which accredited them.

The first British Ambassador to Berlin after the war was one

of this sort. Lord D'Abernon was an agreeable personality slim yet muscular in appearance simple and friendly in his manner even jovial, and extraordinarily helpful in his attitude. He thought highly of German art and science. He was a philanthropist and teetotaller More than that, he was an ardent enemy of alcohol In fact he believed the roots of all evil to lie in drink. I cannot remotely share this viewpoint. I sometimes discussed it with him, but I am quite sure that nothing I said to the contrary altered his strong views one iota. I have often wondered whether his fanaticism in this respect was aggravated in part at least by the compensatory zeal of the reformed sinner rumour has it that as a young man D'Abernon was the model for Claude Farrère's famous novel *L'homme qui assassina* However apart from his hatred of what he called alcoholism, D'Abernon was no puritan, nor was his wife, a woman of sixty with the grace, elegance and slim figure of a woman half her age.

Unfortunately D'Abernon thought that with the dismissal of the Kaiser Germany was cured, and subsequent developments therefore aroused no misgivings in him. Not only was the Kaiser safely and harmlessly in Doorn but—and perhaps that was even more important—the German High Seas Fleet was at the bottom of Scapa Flow There was no further danger and D'Abernon could afford to be generous. He was—to the point of being Germanophile, and he followed Germany's recovery with great interest and sympathy His generosity was shamefully exploited.

Social receptions at the British Embassy gathered together the best and most interesting people in Germany I remember one given in honour of Ramsay MacDonald. He struck me truly as the innocent abroad. He was presented with a representative extract of the Germany of that day Ruling circles in Great Britain honestly believed that Germany had experienced a change of heart, and their attitude was guided by that belief. It was only with the arrival of Ambassador Lindsay that that fond belief gradually disappeared

Lindsay was a lean man with a long moustache, cool and reserved in his attitude. He was assisted greatly by his brilliant *chargé d'affaires* Sir Joseph Addison (who had come with

D'Abernon) In appearance Sir Joseph was a diplomat out of a book. Always well dressed and with a most engaging ease of manner he found it simple to win the confidence of people of all classes Thanks to his charming manners, his humour and his evident love of life, he was a favourite of Berlin society In addition he was a very shrewd man and a remarkable linguist, both his German and his French were excellent and one could hardly recognize the foreigner

Lady Lindsay was an American, and that gave the British Embassy its special note, but with the arrival of Sir Horace Rumbold and his wife the atmosphere immediately became authentically and traditionally English again. By this time it was evident enough that the weakness, often deliberate, of the German Government was tremendously enhancing the strength of the nationalistic elements Sir Horace Rumbold's criticism was frank and his contempt for the Nazi leaders unconcealed When they came to power his relations with them were of the coolest and strictly limited to official necessities though both he and his wife gladly maintained their social contacts with intellectual and artistic circles in Berlin society and this was true in particular of Lady Rumbold and her daughter The Rumbolds hated Nazi Germany and I am sure they were heartily glad to leave it when Sir Horace was recalled soon after the Nazi accession to power

Cambon was French Ambassador to Berlin before the first world war He was a typical representative of an older culture and a more formal etiquette. He was not a war monger but he detested Imperial Germany and had difficulty in concealing the fact. I am convinced that right up to the last moment he did what little he could to prevent the outbreak of war When the inevitable happened he and his daughter left Berlin by car, and had the disagreeable experience of being mobbed by a crowd of patriotic hooligans.

After the war de Margerie père was the first French Ambassador in Berlin He was in the sixties then and a man of refinement with a most tolerant outlook. He came from Lorraine but he had nothing of the obstinacy reputed to be typical of his fellow countrymen. With his grey hair and moustache he was a real grand seigneur in appearance and manners, and towards his

young wife, who was constantly ailing he was more like an ardent lover than an established husband The evening receptions at the Embassy were typically French in their social culture. Mme de Margerie was very musical and herself a fine performer on the harp of quite professional standard. At the afternoon receptions, when there was dancing, the atmosphere was easy and informal, more like a social occasion than a diplomatic affair The Embassy itself is well known for its beautiful interior and for the requisite taste of its furnishings and decorations, but the surroundings are nothing without the spirit breathed into them, and M de Margerie and his wife were most delightful hosts

The French Ambassador was a good deal more sceptical of developments in Germany than his English colleagues, but he was not unsympathetic. His general attitude to affairs was very much that of Briand. He was not well liked in the Wilhelmstrasse, and though he complained bitterly of the lack of honesty shown towards him, he never took vigorous action to insist on the proper fulfilment of the provisions of the Versailles Treaty

His successor was François Poncet, a trained literary historian and something of a diplomatic outsider He had taken his degree in Germany with a dissertation on a theme from Goethe. His wife was a charming woman from Alsace, and like so many of her fellow countrymen she was very French. I believe she was happier looking after her household and her five children than attending to diplomatic affairs François Poncet showed a keen interest in Germany and he must have seen much and learned much, but nevertheless he, too was overtaken by the swiftness of events. Even after he had seen Hitler in power he still felt convinced that he would change his views To this one of his listeners observed drily 'His views maybe, but not his character"

Not that François Poncet was an innocent far from it. He did not trust the Nazis, and his contempt for their barbarism was profound, but his own character was too high for him to conceive the depths of perfidy and inhumanity to which they were capable of descending A typical Frenchman, with his dark eyes and his small pointed moustache, his personality was most engaging He was a very good friend to me, and he suc

ceeded in saving my house from the Nazi vandals. With its beautiful Slevogt frescoes it became the *Institut Français* Unfortunately nothing could save it when the Lancasters drummed over Berlin, and it is now a heap of ruins

Gerard, the American Ambassador to Germany before the first world war was the only one who really saw what was happening, and realized what was going to happen, the war the defeat of Germany the abdication of the Kaiser and proclamation of the Republic The broad-shouldered athletic man always remains in my memory as a prophet—and I can still feel the weight of his great hand when, laughing heartily at something or other he would bring it down on my shoulder with a thump His *Chargé d'Affaires* was a Mr Grew who later became better known to the world as the diplomatic representative of the United States in Tokio right up to Pearl Harbour He was a young man in those days, cheerful and quick witted His formal German remained broken to the last, but he could talk fluently in a Lerchenfeld dialect you could cut with a knife. He still owes me the hundred cigarettes I wagered him that America would enter the war He took the bet as a matter of diplomatic duty knowing full well that he would lose it.

The first United States Ambassador to Berlin after the war was not Gerard, the one real man for the job but a manufacturer of unbreakable glass named Haughton. Perhaps he was a very capable industrialist, but as a politician he did not shine. This was during the inflation period, and at least there was one American in Germany who had eyes to see what was happening that was the Reparations Agent, Parker Gilbert, a confidant of Andrew Mellon. Neither tricks nor propaganda could pull the wool over his eyes. He saw through the machinations of Germany's politicians and financiers and his reports were models of objectivity and firmness. In his spare time Parker Gilbert had an equally keen eye for art and in those inflationary days it was easy to buy More than one valuable work of art found its way into Andrew Mellon's famous collection (afterwards left to the public) through Parker Gilbert.

After Haughton came a thin, friendly little man with an engaging smile, Ambassador Schurmann. He was a professor and very much the professor of popular tradition. As an



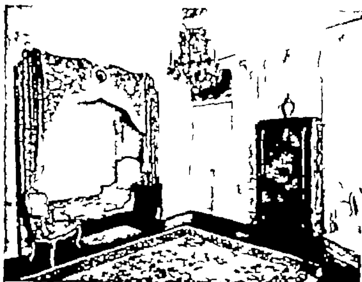
THE AUTHOR IN 1923
Portrait by Max Slevogt.

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BEDROOM OF THE BERLIN HOUSE

The panelling is Louis XV and the bed curtains are from the Imperial Palace at Peking



ANOTHER BEDROOM

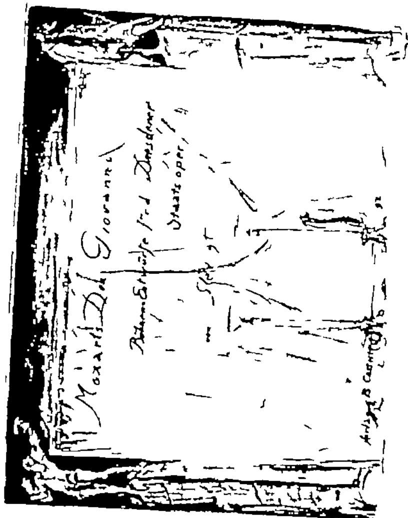
The Chinoiserie panelling is from a Parma palazzo and dates from the 14th century



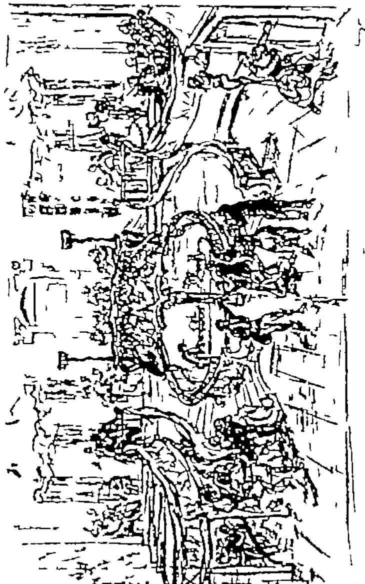
A PORTRAIT OF EINSTEIN BY THE AUTHOR

THE CHAMBER MUSICIAN ALBERT EINSTEIN BY EMIL ORLIK

Autographed by Einstein



STAGE DESIGN BY SLEVOGT FOR A PRODUCTION OF "DON



GIOVANNI" AT THE DRESDEN STATE OPERA HOUSE IN 1924



SELF PORTRAIT BY MAX LIEBERMANN
ABOUT 1930



SELF PORTRAIT ETCHING BY SLEVOGT



SELF-PORTRAIT BY ORLIK



TROTSKY AT BREST LITOVSK, 1918
Lithograph by Orlik.



MATTHIAS ERZBERGER
Portrait by Orlik 1919.



GERHART HAUPTMANN READING HIS OWN WORKS BEFORE AN AUDIENCE

Sketch by Orlik made in 1919.



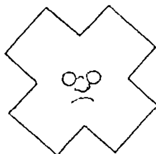
ORLIK POSTER FOR HAUPTMANN'S "DIE WEBER" FOR A PERFORMANCE IN 1897



BRONISLAV HUBERMAN
Portrait by Orlik, 1919



IBSEN IN FRONT OF THE CAFÉ MAXIMILIAN IN MUNICH, 1891
Study by Orlik.



CARTOON OF IBSEN BY OLAF GULBRANDSSON MADE FOR HIS SISTER-IN-LAW BJÖRNSTJERNE BJÖRNSON



GUSTAV MAHLER
Portrait by Orlik.



RICHARD STRAUSS
Portrait by Orlik.

ambassador he was quite out of his element. He had no practical knowledge of human nature and as he was a decent man himself he was inclined to believe that everyone with whom he came in contact was similarly decent. He was wrong. Ribbentrop was one of those who made it his business to come into contact with the naïve and friendly German American, and Schurmann, who was very conscious of his German descent, was partly responsible for Ribbentrop's rise in the world. German science was supreme for Schurmann and the name Heidelberg was like a magic incantation. He contributed the enormous sum of 100 000 dollars to the university for which he was given an honorary degree. Ribbentrop and his cronies turned the induction ceremony into a nationalistic demonstration with Schurmann as the sacrificial lamb. The poor man's eyes were never opened to what game was being played with him, and whilst he remained Ambassador the American Embassy was a centre of pro-German appeasement. When President Roosevelt was elected Schurmann was recalled.

Before the first world war Ambassador de Beyens turned the Belgian Embassy into a remarkably fine gallery of Flemish paintings. He was greatly enamoured of Germany's culture, which he regarded as related to his own and he was very much at home in German society. Under his ægis the Belgian Embassy was socially predominant in many respects and a brilliant centre of Flemish and Brabant culture and riches. Unfortunately the one thing above all others which M. de Beyens was presumably sent to Berlin to see he failed to see at all, and that was the terrifying danger which threatened his country from German militarism.

The Belgian Ambassador to Berlin after the war was Robert Everts, a diplomat of great experience with particular knowledge of China, South America and Mexico, where he had served his country for many years. He was not deceived. He hated what he saw in Germany but he also hated everything which smelt even remotely of Bolshevism and between them the two hates paralysed action. He was a Conservative democrat of liberal outlook (if the mixture doesn't sound all too impossible). A keen sportsman, he rode and swam excellently and he was also a very fine billiards player. Outwardly he was

a silent and keenly observant man, but in a circle of friends he would thaw and talk freely From Berlin he went as Belgian Ambassador to Madrid and when the civil war broke out he removed his Embassy, as most other Ambassadors did to French territory at St Jean de Luz.

I was there on holiday with my wife and children two summers and I had an opportunity of observing the ensuing diplomatic chaos at first hand. Everyone was aware that Franco's victory would endanger the peace of Europe. He enjoyed no one's active sympathy (I am not including Germany and Fascist Italy of course) but he benefited from the general distrust and dislike of 'Reds Bolshevism, Anarchism and Syndicalism, which prevented the Western Powers from killing Fascism in Spain when they had the chance, and thus countering the machinations of Germany and Italy

The first Italian Ambassador in Berlin after the war was Count Bosdari. He was a historian of great knowledge, with a passion for holding lectures. The University of Berlin willingly gave him an opportunity of doing so His lectures, learned dissertations delivered in classical style, were well attended and they would have been had he been simple Professor Bosdari rather than Count and Italian Ambassador Countess Bosdari was also a highly cultured person, and the atmosphere of the Embassy was created by her personality Even on light days lunch or tea was served at the Embassy with drawn blinds by the soft light of many candles. The Countess, a dark Petrarchian type had been a very beautiful woman in her day, but she knew that daylight no longer flattered her and she preferred the gentler candle-light when receiving her guests

Count Bosdari's successor was Aldovrandi. By that time Italy was Fascist, but Aldovrandi, a man of middle age, sophisticated a little tired and an extremely finicky connoisseur of good things, was a very unfascist type. He was no mean judge of antique furniture, sculpture and *objets d'art* generally Women of experience found him fascinating Perhaps he was sent to Berlin more for social than political reasons. The Italian role in Berlin in those days was a little complicated towards the victorious Powers Italy played the role of the insulted friend who wished to be mollified (she felt she had not got enough out

of the Versailles Treaty) towards the defeated Germans she was the patronising but friendly victor And now in addition, she was fascist.

The Italian Embassy was the first to show signs of the nationalistic lunacy which plunged the world into a second disaster and its receptions were no longer so agreeable, though the dinners with their beautifully prepared national dishes and excellent wines were as good as ever When the Embassy gave musical evenings masterpieces were played by masters—but first came the playing of "Giovinezza" It was very depressing

After Aldovrandi came an aged professional diplomat named Orsini, probably more on account of his wife, who was the daughter of Guttmann founder of the Dresdner Bank, than for his capacities but as things got politically more tense he was replaced by Cerutti, a career bureaucrat who had already represented Fascism in China and Moscow He was a tall man with penetrating eyes, at least they looked penetrating, but I suspect they were more like the ultra violet rays which are absorbed by the thin upper layer of the object on which they are focused His wife, Elizabeth, was the daughter of Eduard Paulay the former Director of the Budapest National Theatre. She had been an actress and she was half Hungarian half Jewess, a splendid mixture of the two with her fiery dark beauty Perhaps it helped Cerutti to understand the real character of the regime which had arrived with Hitler when a horde of Nazi hooligans in their brown shirts mobbed his wife. They had recognized the Jewess but not the Ambassadress. Official apologies were forthcoming, of course, for what that consolation was worth. Soon after that Cerutti went to Paris as Italian Ambassador

I am an observer of symptoms by profession, and I am used to building up a diagnosis from comparatively minor indications. It gives me a great feeling of satisfaction when I can obtain a deeper knowledge of things in this way Many such indications as far as Italy was concerned came from my friend Francesco Lequio, whose acquaintance I made when he was at the Italian Embassy in Berlin. Later he went to Cairo and then to Rio to return to Europe again, this time as Establishment Officer in the Foreign Office in Rome. Finally he went

to Madrid as Italian Ambassador With the exception of Madrid and that on account of the war I visited him at most of his posts Unfortunately he died in 1943 of kidney trouble and I was unable to be of any assistance to him. He was an experienced and clever diplomat and I know that he never shared the ideas of the megalomaniac Mussolini. Like others in the inner circle, Lequio knew that Mussolini's grandiose schemes were impracticable. Some of them admired his inner political achievements, but they all knew that in the end his policy must lead to a catastrophe. And they all without exception knew that Ciano was a blockhead

Italy's professional diplomats were purely executive organs they were sent abroad to carry out the ideas concocted in Rome they were like generals in the field theirs was the tactical task of carrying out the strategy of others without criticism—and often without conviction. Grandi did the same in London He certainly was a convinced Fascist, and I have no doubt that he was loyal to Mussolini, but he was a clever and far-sighted man. He was well aware of the dangerous game his master was playing with Great Britain. Grandi liked and respected the English people and he was under no illusions about Great Britain's strength, but it was his job in London to do a little sabre-rattling blackmail. He didn't like the task at all but as a good soldier he did his best. He rarely drank and always attached importance to a good night's rest, but during the days of crisis he would let himself be seen constantly in night clubs until the early hours of the morning pretending *sang-froid* and indifference before all who cared to observe him He bluffed desperately like a poker player with poor cards and a heavy stake but, if I know him the mask dropped off and he collapsed as soon as he was alone in his room. If Grandi's advice had been taken Italy would never have entered the war on Germany's side.

Thanks to my very good relations with Italy's diplomats I knew that Mussolini felt a deep contempt for Hitler as a person, but an excessive respect for Germany's achievements. He over estimated Germany and he under-estimated Great Britain That cost him his life But Mussolini was not another Hitler Not all his work was bad some of it can be taken over and

developed to the benefit of Italy whereas Hitler's work must be extirpated utterly if Germany is ever to raise her head amongst the nations of the world again.

I was not in very close touch with Czarist diplomats in Berlin I knew Count Osten-Sacken quite well, but it is not an acquaintance I look back on with any pleasure. The man was a senile *débauché* and he had taken the whole first floor of the Hotel Minerva opposite the Embassy and installed his kept women there under his eye. He was, perforce perhaps, what is known as a *voyeur* From his Embassy window he could indulge in his remaining pleasure to the full

After the war and the Russian Revolution there was a very different atmosphere in the grey building of the Unter den Linden Embassy and very different men took charge. At first everything was extremely secretive. Mysterious figures furtively approached the Embassy after dark and were cautiously admitted, or they slipped out equally cautiously and disappeared in the gloom. But when Krestinsky arrived things changed and I have described the new regime elsewhere in this book. The Russians were assiduously courted and spied on at the same time, but the Germans got very little for their trouble one way or the other Moscow at least was one capital where those in authority were never for one moment in doubt as to what they had to expect from Germany

However the house in Unter den Linden was only the formal Embassy the real one was in the Lindenstrasse, where the Soviet Trade Delegation had its offices. And here the Russians were equally assiduously courted but this time by Germany's industrialists avid for large orders at excessive prices. To use a German patriotic phrase, the Russians really did "Give gold for iron" or steel if you like, but it was steel in the form of tools and machinery The Russians were willing to pay heavily but it was they who in the last resort got the better of the bargain. The Russian war machine which finally broke Germany owed much to German aid The apprentice served his time and then beat his master

Although I always maintained very friendly relations with the Polish aristocracy through the Radziwill, Potocky Mieczinsky Skoldzky and Wielopolski families, the only Polish

diplomat I knew well was the Polish Ambassador Olszovsky He was an honest enough man and a loyal representative of Pilsudsky He disliked and feared Russia, and he was honestly in favour of an understanding with Germany but he was not clever enough to keep his end up against Germany and at the same time avoid offence to Russia. I say not clever enough", but could any man, no matter how clever, have made a success of Poland s foreign policy? The new born babes of the dilettantist peace of 1919 all sucked greedily—and they almost all upset their stomachs. The Polish baby was the greediest of them all. It had already been given far more than it could digest satisfactorily and it still envied the possessions of others. It seized Vilna by force from the Lithuanians, and at the last moment it perfidiously joined hands with Germany to rob the prostrate body of Czechoslovakia. The world should not so easily forget experiences of that sort.

I have, of course, known very many people of importance in Hungary and when I stayed in Budapest I was always overwhelmed with requests for professional consultations. Amongst my patients were many people of high character and intelligence, but few of them are known outside Hungary The three figures of European importance I knew well were the Regent Nicolaus Horthy the Minister President Count Bethlen and the fascist leader Julius Goemboes.

Horthy was never anything more than an Austro-Hungarian subaltern officer in Admiral s uniform. His mental horizon never enlarged beyond that of a naval lieutenant, and a mediocre one at that, and his format as a statesman was truly insignificant He was a man of medium height with a good figure, and he looked well in uniform. He had clear-cut features, an eagle like nose, a square chin and a rather high forehead which made him look more intelligent than he was in reality I said just now that he had the mental horizon of a naval lieutenant but I am giving him too much credit his mental development was arrested in his cadet-school days. He was brought up in loyalty to the House of Habsburg and it is a bit of a mystery to me how he could ever have conducted himself so disloyally towards Kaiser Karl. During my conversations with him I came to the conclusion that his outlook, if such it

can be called was a sort of petrified conservatism, and that he was never likely to form any new opinion of his own. The mere mention of Russia—not even Bolshevism—was to him like a red rag is supposed to be to a bull. But if one avoided irritating his raw spots he was tractable enough. His Ministers had no very difficult task, therefore, and a man of Stephan Bethlen's capacity found it easy to manage him.

Bethlen himself was a European in outlook and a very talented one. He was certainly no friend of the Germans and it was not long before he recognized the danger that threatened Hungary from that quarter. Unfortunately the high estimates which have been made of his political ability were exaggerated. When he took office after the short Béla Kun interim he soon succeeded in repairing its ravages and those of the reaction which followed it. It is to his credit that he cleared the immediate circles around the Regent of a murderous crew of hangers-on, but he was not energetic enough to go farther than that. He had neither the will nor the capacity to introduce any far-reaching reforms against opposition.

Once he had secured a little improvement he was content to leave it at that. He was something like a lazy peasant who is content to hold the reins and let the horse jog-trot on, quite satisfied if the cart misses the worse pot holes and doesn't get stuck in the mud at the side of the road. He was an honest man and a man of good will, but he loved his own comfort too much ever to be a vigorous guider of his country's destinies. He was happier on his estate with his guests around him than when dealing with affairs of State. Hungary was hemmed in by Slav peoples, and if Bethlen had one firm political conviction it was that her interests demanded that she look to the Slavs rather than to the Germans. This far reaching political conception was greater than his policy. Although Hungary owes something to him, it is doubtful how the final balance sheet will look. It was due to his lack of energy that the corrupt bandit Julius Goemboes was not uprooted when opportunity afforded in the beginning. Hungary paid dearly for that sin of omission. Goemboes tied Hungary to Hitler's chariot and she was also dragged to disaster.

Both Goemboes and his very agreeable wife were my patients.

I treated him for kidney trouble and her for heart trouble. Goemboes had a fat, clean-shaven face out of which, most incongruously a tremendous aquiline nose jutted like the great beak of some bird of prey When he came to power he proved a very willing accomplice of Hitler and as the dictatorial ruler of Hungary he committed one foul brutality after the other His kidney trouble carried him off at a comparatively early age, to the belated good fortune of his unhappy country

CHAPTER XVIII

EINSTEIN

AMONGST THE MANY scientific men who are, or have been my friends there is one who out tops all the others in stature, and that is Albert Einstein. Since the revolutionary post war period when we first met we have experienced many happy days and some difficult times, and our intimate friendship has now lasted over a quarter of a century

Some of the problems with which Einstein has dealt are still the subject of dispute in scientific circles but no one—no real scientist, that is—disputes Einstein s unique significance in the world of science. However it is not my object here to deal with the work, but with the man One day the definitive biography will be written. On the basis of my long friendship with him I feel that I can offer valuable material towards an understanding of his personality It has always struck me as singular that the marvellous memory of Einstein for scientific matters does not extend to other fields. I don t believe that Einstein could forget anything that interested him scientifically but matters relating to his childhood, his scientific beginnings and his development are in a different category and he rarely talks about them—not because they don t interest him but simply because he doesn t remember them well enough. If you ask him anything about them he becomes uncertain and calls for his wife, Elsa, who has lived only for him and his well being and who knows all there is to know and is more than willing to pass it on in her agreeable Swabian accent. Unfortunately this last

passage should have been written in the past tense. Einstein's wife died in the United States in 1939. Other material has come from his two step-daughters, but the most valuable material has come direct from Einstein himself and from my long relationship with him

"You're quite right about my bad memory for personal things," said Einstein when he read this chapter in MS "It's really quite astounding Something for psycho-analysts—if there really are such things.

Einstein is a keen observer and a sharp critic. His objectivity in judging his own work is almost brutal. In self-analysis he aims at the utmost truth without mental reservation. It is truth he wants, and any form of deception is hateful to him. At the same time he is fanatically insistent on his own independence, even in conventional relations, and the least threat or shadow of a threat to it is enough to disturb him. Even in married life he rejects the corporative "we" No one, literally no one, is to have any right whatever to speak for him In his Berlin home in the Haberlandstrasse there was one room which was absolutely his preserve not even the cleaner was allowed in and least of all his wife. It was here that his work was done and his friends received to discuss problems without interference. It was always a matter of regret to his wife (he always referred to her as "My old lady") that she was unable to look after him and his things in that room as everywhere else but Einstein was adamant never mind the dust and disorder it was the independence that mattered

He accepted his post at the Kaiser Wilhelm Institute for Theoretical Physics only on condition that he was not expected to fulfil any particular obligations for his 18 000 marks (about £900) a year salary and that he was to be left to do exactly as he pleased. When he was asked what annual sum he required as expenses for the Institute he couldn't be bothered to make out accounts and declared that he would buy all pencils and paper all he required for his investigations, out of his own pocket there would be no other expenses In fact he was always able to arrange it so that he "had no institute on his neck" as he put it. He wanted no one to tell him what he had to do and he had no desire to tell others what they should do There was, in short

nothing of the *Fuehrer* about him—and nothing of the subordinate.

When he needed assistance he paid for it himself. But that wouldn t do at all, so good friends arranged that a sum of 10 000 marks (about £500) should always be in the bank for him, and that whatever sum he drew the remainder should always be made up to the original 10,000 marks. There was no one for Einstein to thank or be beholden to, because the donors remained anonymous, but in one of his writings on the magnetic field theory he expressed thanks for the assistance the fund (der physikalische Fond) had been to him in his researches. When the Nazis seized his property and resources they also laid hands on this fund though it was not his money

Einstein was not troubled by the fact that he never received an appointment at the University He was, in any case, not a professorial type at all, and he valued his independence more than any formal position Thanks to the inaugural charter granted by Frederick the Great, his membership of the Academy gave him the right to lecture at the University whenever he felt inclined, and he did so from time to time. On such occasions the *auditorium maximum* was always filled to overflowing. But his main contact with the University was maintained by regular visits together with his colleagues Haber Laue, Schroedinger Planck and Rubens, to a seminary every Thursday afternoon at which there were free questions and discussion He would not have missed one of these sessions for worlds it was one of the few regular obligations he had imposed on himself All his other relations with universities, including Leyden and Madrid left him complete freedom.

Dolce far niente was not foreign to Einstein s character and I have often heard him say that it was more natural for a man to laze than to work. But he had so much to do that he found little time to indulge this side of his nature. He was always busy and certainly his brain was always at work. It was his self-appointed task to solve, or approach the solution of, nature's physical mysteries. He saw problems in things which for other people were obvious matters not worthy of a second thought what was the exact process by which the sand on the sea-shore hardened when the water drained away? Why did

the tea leaves in his cup go to the centre of the whirl when it was stirred? He would seek the solution of what often appeared the simplest problems, deceptively simple in fact, and in his search he would often reveal truths which had previously gone unnoticed.

On one occasion he was ill and I kept him in bed. It was at this time that the very practical little invention of the ever ready note block came on to the market, and I bought him one for his bedside It consisted of some wax like substance over which a sheet of prepared paper was laid, and on this notes could be made with a sort of stylo The writing disappeared as soon as the paper was separated from the base. How rapidly and summarily I solved the problem to my own satisfaction, and what complicated thought and effort Einstein put into it before he was satisfied!

There was hardly a simple every-day phenomenon which did not arouse Einstein's keen interest. I remember we were out walking one day and it was rather windy Suddenly he said 'Do you know I wish I had even the faintest idea what wind is!" And then he treated me to a dissertation on everything wind might be. The ordinary mortal is completely satisfied with an explanation of simple phenomena just at the point when Einstein really begins to get interested in the problem. And once he starts thinking about a thing he goes on to the end If he is ignorant of any point in some specialized problem, then he shows extreme patience in listening to the information he wants, and from his questions it soon becomes clear that not only has he grasped the essence of the problem but noted immediately any weak or doubtful points in the explanation given him Within a short space of time the questioner becomes a source of information the pupil becomes the teacher with a brilliantly formulated synopsis he throws light on the whole complex and provides valuable indications for further inquiry No one ever went away from him with empty hands, or with the feeling that he had been bored with a question or had under estimated its importance.

I have always had the impression that topical questions interested him most. When he answers a question there is nothing of that bumptious display of authority met with only

too often in men of smaller calibre, the type who give you not their own modest opinions but a revelation from on high. Einstein's own modesty is sometimes quite touching. If after consideration he is not altogether satisfied with an answer he has given, or has found some cause to revise it, whoever asked the question can be quite certain of receiving a letter setting out still further and more cogent arguments in support, or giving the reasons why Einstein was wrong. And no matter how serious the problem may be his manner is never ponderous: he never exaggerates his own importance or takes himself too seriously. He is always keenly aware that he is a fallible mortal like the rest of us, and he always strives to put the matter as simply as possible, avoiding all unnecessary verbiage. I have numerous letters from him dealing with questions we have discussed.

From professional interest I once asked him what he thought was the reason why people who suffer from weak hearts always find it more difficult to breathe against the wind. His first idea was that the wind caused a rarification of the air round the nostrils as though round a ship's exhaust, thereby increasing respiratory difficulties. A day or so later I received a letter in which he declared that on thinking over the problem he had come to quite the opposite conclusion, namely that it was the condensation of the air as a result of the wind pressure against the face which caused the trouble. I really don't know how great my debt is to Einstein for all the inspiration I received from our long and frequent discussions, and when I dedicated my book* on the heart and the blood vessels to him it was not merely from admiration of a great scientific personality but also in real gratitude.

One might imagine that it would be difficult to doctor a man of such high pragmatical thought as Einstein, but in fact he was a very good patient indeed, obedient and trustful, and grateful for what was being done for him. As to the basis of that trust, he once explained that he quite realized that our primitive thought must necessarily be inadequate in face of such a complicated piece of mechanism as the human body, and that the only proper attitude is patience and resignation

* "The Physiology and Pathology of the Heart and Blood Vessels."

supported by good humour and a certain indifference to one's own continued existence." There was thus no call for me to get swelled head at the trust reposed in my medical abilities by the greatest of all living scientists. But Einstein was always prepared to give way to the knowledge and experience of others, and he willingly carried out whatever instructions I gave, at the same time watching the phenomena of his sickness whatever it was and carefully observing the effect of my treatment. When on one occasion he suffered from acute over-exertion of the heart it was our joint observation of the case which gave me the idea of myocardiac congestion.

One might think that a man of such exceptional capacity as Einstein would be intolerant and impatient with less gifted people, but on the contrary. I know hardly anyone who is milder in his personal judgments than Einstein, though, it is true, exceptional stupidity can upset his composure and then the language he uses for his judgments is not borrowed from any manual of polite speech. And there are occasions when the enormity is so great that words fail him, and then the expression on his face is enough.

Fundamentally Einstein is a man of great good nature, and he is very unwilling to hurt anyone's feelings. The sight of distress always inspires him with a desire to help. He gives away what spare money he has—he never has much—to people in need of assistance. He could be a rich man if he wanted to but he attaches no importance to material possessions—regards them, in fact, as something of a nuisance. He has always firmly rejected any relationship which would bring him in money—and limit his independence. The financial grant which goes with the Nobel Prize (it is quite considerable) was made over to his first wife and he never saw a penny of it. And if his second wife, Elsa, had not been a very good housekeeper they might often have been short of sheer necessities.

Einstein demands little or nothing for himself. He attaches no importance to material things and he despises outward show. His disposition is happy and his happiness is almost independent of outward circumstances—in fact quite independent in so far as they relate to material possessions. For him the simple and the complicated are equally acceptable. As his

mind knows no limits so his body follows no set rules he sleeps until he is wakened he stays awake until he is told to go to bed he will go hungry until he is given something to eat and then he eats until he is stopped. I can remember his consuming between five and ten pounds of strawberries at a sitting on more than one occasion at my country house in Gatow On another occasion the famous Italian philosopher and staunch anti-Fascist Benedetto Croce was a visitor there. The great Italian, Einstein and I strolled round the grounds talking It was the time when walnuts were falling ripe from the trees, and as we talked we ate them—for four hours without stopping As Einstein never seems to feel the ordinary impulses to eat, etc., he has to be looked after like a child He was very lucky in his second wife.

Elsa did look after him with extraordinary care and attention On one occasion when he had to go to Rio de Janeiro to give a series of lectures she packed his case with everything he could possibly need on the way and when he came back she opened the case and to her surprise found it had been beautifully packed. Almost jealously she wanted to know who had taken care of him so well—no man could have packed a case quite like that. For a moment Einstein seemed a little out of countenance, and then he laughed heartily and confessed he had never opened the case at all

The gift of laughter has been given to him in full measure. There is nothing of the preternaturally solemn professor about him he can laugh heartily and he does. He enjoys a joke, and he can often see the funny side of situations most people would regard as utterly tragic and I don t mean utterly tragic for other people, but for himself. I have known him laugh even when a mishap or misfortune has really moved him. Incidentally I have noticed the same phenomenon with other great spirits—Lord Keynes, for instance. With them laughter is not merely the reaction to the comically incongruous. Einstein can also rid himself of disagreeable things as a wet poodle rids himself of water A shrug of the shoulders, and on to something else Life s too short to waste on disagreeable matters, is his attitude there are so many more important things to attend to. This may seem to suggest that he has no very deep feelings, but he has, he can hate and he can despise—and both from the

bottom of his heart. It is difficult to make an enemy of him, but the man—or woman—who succeeds is cast out for ever. I remember how he positively hated the wife of one of our friends, a great musician. He felt that the woman was tormenting a great artist and robbing him of peace of mind and independence. One day when we were discussing some new example of her shrewishness he declared: "You know that's a creature I could kill in cold blood. I'd like to put a rope round her neck and tighten it until her tongue lolled out." And he made the appropriate gestures with his hands. I really believe he could have disposed of the Xantippe in the way he described *without his conscience ever troubling him.*

As I have said, there were times when Einstein's contempt was too deep for words. The rich dye manufacturer Arthur von Weinberg, a Frankfort intellectual and dabbler in the sciences, wrote a pamphlet attacking the theory of relativity and seeking to dispose of it *ad absurdum* by biological examples. All Einstein ever said about it was a passing remark to me: "To exclude the biological process from the theory of relativity is on a par with saying that the theory of electricity mustn't be applied to pig breeding." Beyond that there was no answer from Einstein, though Arthur von Weinberg would have given a lot to have had one, no matter how devastating it might have turned out; but for Einstein his incompetence was below rebuke.

What raised Einstein so far above the other scientists I have known was his imagination and fantasy. Once whilst we were taking a stroll together I asked him what in his opinion was the final aim of mathematics. He laughed and declared I would have to formulate my question in a rather more simple fashion before he could hope to answer it. I went on to say that I felt there was a similarity between mathematics and fiction, in which the writer made a world out of invented characters and situations, and then compared it with the existing world. Einstein considered this for a moment and then replied: "There may be something in what you say. When I examine myself and my methods of thought I come to the conclusion that the gift of fantasy has meant more to me than my talent for absorbing positive knowledge." And it is quite true that his genius is guided more by imagination than by knowledge.

I remember coming upon him stretched out on the sofa in my country house in Gatow obviously lost in thought. I sat down without talking to him, and suddenly he got up stretched himself and declared 'You know *I feel* I'm right, but I don't know it yet' He was referring to the magnetic field theory which was occupying him at that time. He finished his work and presented his dissertation to the Academy only to withdraw it a few days later I am sure that had he let it go forward no one would have discovered the flaw in his reasoning or, at least, not for a very long time, but he had done so and he did not hesitate for a moment to scrap the result of years of study and thought, and start all over again from the beginning When he put down on paper the results of any of his labours he was always very anxious to make them generally understandable. Whilst he was engaged on this second tussle with the problem he came to me one day and declared disconsolately 'I'm afraid I'm wrong again I can't put my theory into words I can only formulate it mathematically and that's suspicious. Of course, this does not mean as he immediately pointed out, that he had ever tried to express a theoretical physical idea without a mathematical formula. That was almost always impossible.

In explaining his ideas Einstein is unique. He requires no very great knowledge on the part of his *vis-à-vis* merely good common-sense understanding The patience which Einstein shows in talking to less complicated minds, often women and children is extraordinary Many secondary lights find it quite beneath their dignity to talk to people whose knowledge and intelligence they consider inferior to their own and to try to explain things to them. With Einstein it is different. Whoever goes to him with a serious question can be sure of an answer couched in the simplest possible terms, and if there is anything that makes him impatient it is empty intellectual blather With children he is extraordinarily patient, and he has a particularly fine faculty for observation which stands him in good stead with them He could talk about things for hours with my two youngsters, who, at the time I am thinking of were three and nine years old respectively My elder boy got his first grounding in astronomy from Einstein. Einstein sees what others would pass over as unimportant. I have noticed that vain people have

no intimate contact with children. Einstein is the opposite of vain.

As I have already said, he attaches no importance to outward show and this applies in particular to clothing any old suit and shoes will do as long as they are comfortable, and in clement weather he likes best to wear a pullover shorts and sandals In this rig-out he will sail for hours, and if the sun is hot enough to make him feel the need of head covering what s better than a knotted handkerchief? For him to have to put on evening dress and generally smarten himself up to go out in response to some dinner invitation is a minor torture. However he subjects himself to it when necessary because he is not indifferent to other people s feelings even when he does not share them. He feels it a duty to go conventionally dressed and so he goes, but his dislike of the whole business is one of the main reasons why he so rarely accepts formal invitations. As might be imagined he spends little time on his appearance. How long his leonine mane would grow if his wife didn t trim it for him occasionally I don t know because he would never spare the time to go to a hairdresser in the ordinary way His moustache was always trimmed in a very amateurish fashion—whenever it began to get in his way and not before. But shaving was a different matter He shaved himself regularly He was not prepared to spend time on beautification, but neatness, cleanliness and a smooth face and chin were part of a duty to the rest of the world. Yes he was one of the simplest men I knew simple and unassuming but there was character in his simplicity

The world, of course, has showered honours on him. They have had as much effect on his original character as water on a duck s back. He has seen a statue of himself placed above a church porch as though he were a saint he has seen the people of Madrid kneel in the street when he passed But it did not flatter his self-esteem on the contrary he disliked it. "Excessive recognition is disagreeable to me because I feel too strongly the suggestion and illusion behind it," he once wrote to me. "All this hubbub has nothing to do either with me or my work." He has been received by crowned heads with the highest honours. Scientific associations have fallen over each other to elect him an honorary member And it has had no effect on him.

Once I asked him what recognition had really given him most pleasure. "The recognition from my scientific associates," he replied. Thus he was really delighted to receive the Planck Gold Medal which was struck as the result of contributions from mathematicians and scientists all over the world and formally presented to him as the first recipient by Planck himself.

On the day the presentation was to take place Einstein was at my house for lunch. After the coffee he lay down on the couch and went to sleep. The presentation was at five. Just after four he got up. "They'll expect me to say something or the other," he observed and sitting down at my writing-desk he took the first scrap of paper that came to hand (it happened to be a bill from my bootmaker and he used the back of it) and began to scribble. Over lunch we had discussed the crises experienced round about 1930 in the theory of causality by the advance of mathematical science. He scribbled away for about twenty minutes and then we went off to the Institute of Physics, where the presentation was to take place. The hall was full to the last seat with famous mathematicians and physicists. Planck took the floor and made a conventional speech: with what honour and what pride he presented the gold medal to such a great scientist, and so on. Then Einstein spoke. "I knew that an honour of this sort would move me deeply," he began, "and therefore I have put down on paper what I should like to say to you as thanks. I will read it." And out of his waistcoat pocket came my bootmaker's bill with the scribble on the back, and he read out what he had written about the principle of causality. And because, as he said, no reasoning being could get on at all without causality he established the principle of super-causality. The atmosphere was tense and most moving.

I claimed my bootmaker's bill afterwards and I kept it carefully, but like so many other of my treasured possessions it fell into the hands of the Nazi barbarians. I have an idea that the noble Ambassador Gauss of the Nazi Diplomatic Corps knows what happened to it. Einstein also handed me the Planck medal. It was of solid gold with a bust relief of Planck. It was still in the case. He never took it out or looked at it again. The honour from his scientific colleagues had meant a lot to

him, but he was not in the least interested in the gold medal I had it for years in safe keeping and finally I handed it to his wife when the time came for Einstein to go. He has never even mentioned it since. That evening Einstein, Slevogt, Gruenberg and I went out to a typical Munich beer cellar to enjoy a Weisswurst and beer No further reference was made to the memorable sermon.

Once when Einstein was in Hollywood on a visit Chaplin drove him through the town. As the people on the sidewalks recognized two of their greatest, if very different, contemporaries, they gave them a tremendous reception which greatly astonished Einstein. "They're cheering us both, said Chaplin "you because nobody understands you, and me because everybody understands me." There was a good-humoured pride in his remark, and at the same time a certain humility as at a recognition of the difference between ready popularity and lasting greatness.

Elsewhere I have expressed the opinion that the criterion of character is that a man should not lose his head when honours and eminence come his way In this connection I remember a story Einstein s wife told me about their reception in Tokio. Einstein went to Japan at the invitation of a Japanese newspaper proprietor to hold a series of lectures. It was shortly after the first world war and Japan was ostentatiously anti-German out of consideration for her Western European allies, but Einstein and his wife were received with all honours and installed in a whole suite of rooms complete with ornate balcony on the first floor of one of the biggest and best hotels in Tokio. All night long big crowds flocked to the square in front of the hotel, many of them armed with camp stools, mats and other comforts to help them through the night of waiting until the great man should appear on the balcony in the morning They remained perfectly silent throughout the night but when the sun rose a clamour arose with it from a packed mass of people who now desired to have their patience rewarded.

Einstein went out on the balcony with Elsa just behind him. As soon as they caught sight of him a tremendous roar went up from a hundred thousand throats, and there was a hurricane

of whatever serves in Japan for cheers of welcome and admiration. Einstein was quite overwhelmed and there was nothing he could do but smile and bow but out of the corner of his mouth he muttered to his wife 'You know Elsa, I don t think any living being deserves this sort of reception" The jubilation continued unabated, and then Einstein muttered again between his smiles and bows, Elsa, I m afraid we re swindlers' And then after a further while of smiling and bowing Elsa, I m afraid we ll end in prison yet"

That wasn t altogether a joke. Most people faced with such a reception would have felt a crescendo of self-satisfaction welling up in them, but with Einstein it was just the opposite. It made him feel humble. That was more or less typical where pride might have been expected there was humility, and where he might have been expected to bow he showed pride and independence.

On one occasion Einstein stayed for quite a long time at my house in Gatow on the Havel because it offered him the absolute peace he needed to finish off a certain task he was engaged on As Gatow was outside the town limits the city fathers had deemed it far enough away to harbour the town sewage farms. Since then, however the neighbourhood had become much more populated and the presence of the sewage farms was developing into a problem. If the wind sat in the wrong quarter we would get a disagreeable whiff from time to time. The question of removing the sewage farms was under discussion. One day the Mayor of Berlin, Boess, was my guest at lunch, and Einstein was there too It happened to be one of those days when the wind was in the wrong quarter and we got an occasional whiff of sewage. As First Citizen Boess felt some responsibility for the inconvenience and in some embarrassment he asked Einstein whether he found the smell very disagreeable.

Well, it s no perfume," Einstein replied but there, I revenge myself from time to time." When Einstein left Germany for America a group of foreign journalists accompanied him to the train to see him off The train was late and their leader began to worry about whether Einstein would get his boat connection in Bremen It was at a time when racial distinctions were already beginning to play a nastier role in the Reich Don t

vorry " said Einstein, "some Aryan will have reckoned it all out roperly

It is characteristic of Einstein that he never loses his sense of umour no matter what the situation. He can laugh up-oariously over the simplest things. If you happen to tell him he same joke twice he will not interrupt you like so many eople who pride themselves on their perceptive faculties and an't listen (a sign of bad character) but listen tolerantly and augh with you again. He greatly appreciates mother wit and s as delighted as a child with his own witticisms, even when ometimes a biting remark slips from his lips amongst friends. He is certainly no prude, though with most thinking men he ejects sheer filth, but he is not afraid of the broad story rovided it has real wit it can be as broad as it likes. His ompany is easeful

Einstein needs recreation from work and he thoroughly njoys it, but not the sort which is associated with any to-do. He refers to amuse himself in the company of a few good friends. He realizes, of course, that he has certain social responsibilities and he does his duty although he knows that he is often xploited However he is prepared to let himself be used as table decoration" as he calls it, when any good is likely to esult, and to let himself be handed around. Feeding time at he zoo" is his favourite description for such formal social affairs. He dislikes late nights they disturb his work the next lay And he doesn t care for drinking parties, though he is no eetotaller He likes a glass of good brandy but he never does more than sip it. One vice he certainly has, and that is smoking He is hardly ever to be seen without a pipe in his mouth, except vhen it is a cigar instead A good cigar is a real pleasure for him and its lighting up a ceremony Officially his wife allowed him one cigar a day and outwardly he submitted to this discipline, but in his room there was always a box of cigars kept replenished by good friends in the innocent conspiracy to throw dust into Frau Elsa s anxious eyes.

Music, good music, is a necessity for Einstein. It is both rest and recuperation for him. He has an extremely fine ear and therefore only the best music performed by fine players can give him pleasure. He has no time for what he calls "canned music"—

gramophone or wireless. Of course, since those days the technical standards of reproduction have improved tremendously and perhaps in the United States he has overcome his objections. He is a fastidious lover of classical music, but he abhors popular music, Puccini's for instance. Bach on the other hand can move him deeply. I have known very many professional musicians, but there was hardly one whose feeling and understanding for good music was deeper than Einstein's, who can talk with the experts as an absolute equal.

In a waterside pavilion at Gatow I had an organ, and Einstein often went there on his own and extemporized sometimes for hours on end. When this happened on Saturdays and Sundays there was always a great crowd gathered outside on the river in boats, canoes, yachts, etc. listening gratefully to his remarkable performances. It was not mere curiosity that drew them: no one knew that it was Einstein who was playing. It was the sheer musical enjoyment his playing afforded. Not that Einstein was a virtuoso: he was not—to his everlasting regret. His favourite instrument was the violin, and although he had a whole collection of very fine instruments presented to him by admirers who knew his tastes, his favourite violin was not the work of any famous maker but a simple instrument made in Japan, and it was on this that he seemed to get the best results. He was not a very good technical performer, but I don't know anyone who exceeded him in fervour and sensibility. He would practise very zealously for his beloved chamber music evenings, but it was on this field that he felt the gap between desire and performance most deeply.

His hand was not the characteristic one of the great artist. It was rather long and yet fleshy with pointed fingers, quite different from the bony fingers of Wagner or those of Franz Liszt (there are plaster impressions in the Weimar Museum) or from the hands of Kreisler, D'Albert, Orlik, Slevogt, Schnabel and other great artists I have known. With those pointed fingers of his Einstein could produce a fine enough tone, but he lacked technical virtuosity and, in particular, a fluent technique of bowing. He is well aware of his shortcomings in this respect and they often make him comically furious, particularly when he has to negotiate an unusually difficult passage. As I have

said, he is not a jealous or envious man, but in such moments he does envy the great performers from the bottom of his heart. However his own difficulties usually end up in a burst of mortified laughter

The expression of his features in different moods is striking When he is himself playing (provided he is in no difficulties) and particularly when he is listening to orchestral music, his face is calm and serene, the eyelids are half closed and there is almost a smile round his lips as he sits there enjoying the music. When he is listening to some statement or explanation on a scientific subject his expression is totally different. He usually stands with his hands behind his back and listens with complete concentration, his features relaxed, the head bent forward a little, his eyes fixed on one point. And when he is thinking out something for himself he is lost to the world as though he were in a trance. In Benares, the town of Buddha on the Ganges, I once visited the biggest Dagaba in the world, a gigantic monument of brickwork built originally to house the hair that Buddha is supposed to have twisted like a corkscrew round his finger when deep in thought. When Einstein is deep in thought he invariably and absently twists a lock of his hair into a curl the whole time his eyebrows are raised and the sockets of his eyes look enormous, whilst above them his huge forehead almost shines in the aureole of thick grey hair He has an unusual head At such times it seems as though his skull is very large, but the impression is deceptive. The whole brain seems to be in the sinciput, and to the great annoyance of all the artists who have drawn, painted and sculpted his head it has practically no occiput to balance the great mass of forehead. For this reason hardly one of them has made a really good likeness of him. They all seemed to have been dismayed by this great skull without a proportionate back to it

In another respect too Einstein s appearance is deceptive. At first glance he looks fleshy but in fact his build is muscular and quite powerful. He is capable of considerable physical effort and there is nothing wrong with him constitutionally In fact, there has never been much wrong with him at all apart from minor stomach troubles and once an acute dilation of the heart brough on by excessive physical effort. He was

staying with our good friend Willy Meinhardt, the President of the Osram Concern, in the Engadine. Einstein had been called as an expert witness in a patent dispute before the Supreme Court in Leipzig between the A.E.G. and Siemens. Returning from Leipzig to Meinhardt's place in Zuoz he arrived rather late in the evening when he was not expected and he had to toil up to the house on his own carrying a heavy suitcase.

It was quite a hard climb at the best of times and now it was made much more difficult by slippery snow. It was more than the fittest man could do with impunity and Einstein paid for it with heart trouble which took him years to get rid of. But he did get over it, and I believe it left no bad effects once it was over. The P.T. adepts have declared that it wouldn't have happened if Einstein had kept himself in constant trim by regular exercises. Up to a point no doubt there is something in what they say. Einstein never took any exercise beyond a short walk when he felt like it (which wasn't often, because he has no sense of direction, and therefore would seldom venture very far afield) and whatever he got sailing his boat, though that was sometimes quite arduous—not the sailing exactly but the rowing home of a heavy yacht in the evening calm when there wasn't a breath of air to stretch the sails. The Zuoz incident was therefore, as Einstein freely admits, perhaps the last of quite a series of over-exertions.

Einstein loves sailing: sailing in his own boat, not being sailed by someone else. When he takes a holiday he always goes to the water if he can, and there he cruises around for hours with no coming back for set meal-times: he takes his food with him. He loves the wind whether it is his helpful coadjutor sending him scudding along in the direction he wants to go, or an obstinate opponent who tries to bar his path and send him spinning round where he doesn't want to go. He is a good sailor and he uses the wind or circumvents it according to the circumstances, and few people have [illegible] r sense for it. Sailing offers him relaxation and yet pe[illegible] to think. S[illegible] too felt that a boat was not a bad [illegible] ich "to sol[illegible] great mystery" [illegible] ds more t[illegible] d. He is not a

When on holiday [illegible] his gre[illegible] powers and passionate reader b[illegible] he grasp[illegible] is all-round striking rapidity [illegible]

knowledge is extraordinary He reads poetry with pleasure and he likes a good novel, but he will not waste time on things which have no real fascination for him, and he has no particular feeling for books as such. One might say that although there are always plenty of books in the Einstein *ménage* there is no library Fine editions and bibliographic rarities mean nothing to him, and he needs no reference books. Of course, he is bombarded with presentation copies, and innumerable newspapers, magazines and scientific periodicals regard it as an honour to put him on their free lists, but most of them go unread. One day when a friend who was deeply interested in natural science complained that he couldn t afford to take in the most important periodical on the subject, Einstein just re-addressed his own presentation copy of the journal and never saw it again—or ever missed it.

He doesn t "follow' current literature, but he always seems to be well informed, and his knowledge of the works of the great writers and thinkers is profound. He has a considerable knowledge of history and his own very definite views on historical development. I remember once we were discussing the giants of various periods, and I asked him who he thought was the greatest man of any age. Without hesitation he replied, "Maxwell"

Einstein has no patience or mercy for intellectual obstinacy deceit or hypocrisy and he is not prepared to admit diplomatic or political considerations as extenuating circumstances. As he is an uncompromising lover of truth, so also of justice. He hates injustice as much as he hates lies, and the ill-treated weak and the oppressed have always a firm friend in him. He is by nature a peaceable and contented man and far from aggressive, but he is a determined defender of the fundamental rights of man. He will not compromise a principle and he has a dauntless courage and preparedness to sacrifice his comfort or even his life. When he had to leave Germany he first went with his wife to Knocke on the Belgian coast. He knew very well that the Nazis would murder him if they could They hated him fiercely and he was entirely worthy of their hatred He took no precautions whatever We, his friends, were deeply perturbed at the dangers he was running, and private representations were

made. The Queen of the Belgians was approached, and it was due to her intervention that a guard of four detectives watched over Einstein's safety day and night as long as he was on Belgian soil. Einstein knew nothing at all about it, and perhaps he doesn't know about it to this day. When he went to England his friend Commander Locker Lampson was also well aware of the dangers which might threaten Einstein, and he too was going to take no chances, so he spirited his guest away to a little place near Cromer where I had the devil's own job to find him. We were all of us very glad when he finally arrived in the United States and we could feel that he was finally fairly safe from the attentions of the Nazi murder gangs.

CHAPTER XIX

EINSTEIN'S CAREER

ALTHOUGH I HAVE known Einstein well for the best part of a quarter of a century I cannot offer even a sketch of his career without gaps, but only contributions which may prove useful to a later biographer. Even so I was very unwilling to risk setting down things which might not be true, or might not be quite true, and I therefore asked Einstein to look through these two chapters, which he did in MS. It was a good thing he did so because he was able to make one or two corrections and some additions.

Einstein was born in Ulm on March 14th, 1879. I knew his mother. She was a plump woman then, but she had fine features and remarkable eyes which suggested high intelligence. It was granted to her to know that she had put a genius into the world, and she lived long enough to experience his world-wide fame. Einstein's first schooling was in Munich, where he went to High School until he was fifteen. Later on the family migrated to Milan, where the father opened a shop for the sale of electrical equipment. Einstein remained in Italy for a year, during which time he learnt Italian. Not that he is particularly talented at languages. His Italian knowledge to-day he describes as 'lousy'. He was then sent to Switzerland while his parents remained in Italy, going from Milan to Pavia and

back again. In 1902 the father died in Milan. At the age of twenty-one Einstein took Swiss nationality from the age of fifteen until then he had been without papers, but in those broader and happier days that was of no very great importance.

The Zuerich councillor Mayer has told me how Einstein's mother came to him and asked whether he could use his influence to let Albert jump a class in view of his unusual talent and the fact that owing to the movements of his family his schooling had been a little erratic. Mayer arranged that the boy should take an examination for special entrance into the Zuerich Polytechnic, but young Albert was ploughed well and truly He admits frankly that it was entirely his own fault because he had made no attempt whatever to prepare himself. The result was that he had to go to the Cantonal School in Aarau for the best part of a year and take his matric there. He attended the Polytechnic from 1896 to 1900

In 1902 at the age of twenty-three, Einstein published his first work, and it brought him a modest position at the Patent Office in Berne. As a result of this work, which had aroused interest in collegial circles far outside Switzerland, various people began to visit him one of the first was Laue. Einstein, it appears, was not easy to find. At last Laue discovered that he was in the Patent Office, so he travelled to Berne and approached the President of the Office, who proved to have not the least idea that his staff included someone who was already becoming internationally famous. He didn't even know of Einstein's existence, but after looking up the personnel records a minor official of that name was discovered tucked away somewhere on the fourth floor of the building Laue climbed four flights of stairs and finally found the room in which Einstein was working Einstein was discovered for scientific Berlin.

In 1905 he graduated regularly in Zuerich with a doctoral dissertation on colloidal processes, a work which, in his own words, made some stir and has retained its essential validity ever since" This remarkable dissertation was at first rejected by the academic authorities—purely on the ground that it was not long enough. Einstein still quotes it as a comic example of academic obscurantism Ludwig Stein, Professor of Philosophy founder of sociology as a University course subject

profound so much so that in a conference with Althoff, Minister of Education, and Harnack, President of the Kaiser Wilhelm Association it was agreed to place Einstein in charge of the Institute for Theoretical Physics which was about to be founded This was typical of the reaction of Einstein's great colleagues to his work and his theses, a compound of admiration and understanding Professor Lorenz of Leyden was another scientist who was deeply impressed by Einstein. At that time Lorenz was almost of biblical age with a long and famous career behind him but he granted immediate recognition to the unknown stranger and even wanted Einstein to be his successor at Leyden University but Berlin got in first. However Einstein's deep respect for Lorenz persuaded him to accept a professorship at Leyden, though without lecturing obligations He is still proud of this professorship which was granted him for life. He showed his gratitude and appreciation every year as long as he was in Europe by going to Leyden to deliver a short course of lectures. He greatly liked and respected Lorenz and he loved the quiet old university town of Leyden, and when he returned from these visits he was always very satisfied and content At the age of ninety years, shortly before his death Lorenz had the final triumph of successfully concluding all the involved mathematical calculations in connection with the giant engineering problem of draining off the Zuyder Zee and reclaiming it for tillage It was a tremendous task, and Einstein was loud in his praise of Lorenz. On the basis of his calculations the practical execution of the plan proceeded without a hitch.

By this time Einstein had settled down in Berlin—as he thought, for life However his various scientific obligations often took him abroad and these journeys were a real pleasure to him, for he felt himself at home everywhere, though he had little liking for Prussia and less for Prussianism. But Berlin itself he did like, because it was truly cosmopolitan When he was called to Berlin in 1914 he definitely refused to adopt German nationality but—he writes I accepted it in 1918 after the general disaster at the urgent representations of my colleagues. It was one of the follies of my life. Politically I hated Germany from my youth and I always felt the dangers that threatened the world from her side." Although he agreed

to take German nationality he always retained his Swiss nationality and the possession of two nationalities was possible in Hohenzollern Germany. Non-Germans appointed to official posts were presented at the same time with the doubtful gift of German nationality. Such people were known jocularly as *Musspreussen*, or Prussians by compulsion. I also received German nationality for the same reason as Einstein, but, like him, I retained my own nationality as well, in my case Hungarian.

Einstein's personal circle was made up largely of South Germans, foreigners and, of course, Jews. He has always been thoroughly conscious of his Judaism, but nothing was farther from his thoughts than to place himself at the head of any Jewish racial movement, Zionism for instance, though he has been pushed more or less against his will into this position. Although it may seem strange to some, he was not a Zionist; indeed, he was often a stern critic of some of the institutions in Jerusalem, but he felt that *faute de mieux* he ought not to place any hindrances in the path of the movement. He "does not believe in the necessity for any special Jewish colonization" and he feels rather that "nationalism will soon be played out, and as soon as human society has settled its economic affairs more or less successfully no one will attach much importance to the colonization idea."

Einstein has been forced more or less by circumstances to stress his Judaism. He is, and always has been, well aware of the fact that he is completely Jewish, but this feeling is not racial in the intolerant sense of that word we unfortunately know so well to-day. He is well aware that Jewry could do with a lot of improvement. His demonstrative attitude and the stress he has laid on his Judaism have been a reaction to the injustice and inhumanity suffered by the Jews, a protest against the brutal stupidity with which a highly cultured people have been persecuted. Einstein's profound sense of justice has made him a champion of the Jewish cause, and caused him to do everything in his power to right their wrongs.

Einstein lived happily in Berlin amidst a circle of good friends, but it must not be thought that he enjoyed any very great reputation or popularity outside scientific circles. The

local councils everywhere are only too often in the hands of minor politicians whose outlook is bounded by the parish pump. Berlin's local government was not much better. It was in the hands of typical middle-class and lower middle-class elements. I had to explain at length to Boess, the Mayor of Berlin, who and what Einstein was, before I could convince him that his city numbered a really great man amongst its inhabitants and that it was his Council's obvious duty to show some recognition of the fact. I am sure the worthy Boess was not entirely satisfied with what I told him and pursued his inquiries further as to who this Einstein was. Apparently the result was satisfactory, for he finally agreed with me that it would be a good idea to acknowledge Einstein's birthday by presenting him with a house and garden as a mark of the deep esteem in which he was held by the Berlin Municipality.

All this went on behind Einstein's back, and there was no very satisfactory *dénouement* because the houses and gardens on the list all proved to be quite unsuitable and, I must say, quite unworthy for one reason or the other. With the help of friends the Einsteins finally built themselves a small house on the Havel with its own little harbour in which, on the day they moved in, floated a beautifully built yacht (please don't think of Cowes and luxury—this was a small one-man yacht for Einstein to do his sailing in on his own if he wanted to). The yacht had been subscribed to by Einstein's friends. He was overjoyed with it; it represented the fulfilment of a dream. I think it was perhaps the one thing that hurt him to have to leave behind when the time came to shake the dust of Germany from his feet.

Einstein's continued presence in Germany finally became impossible when an interview he had given to an American journalist was published. The fellow had asked indiscreetly: "And what do you think of Hitler, Professor Einstein?" And Einstein had replied bluntly: "Look at the man's face, and then you'll know what I think of him." Now physiognomy is not an exact science, but in this case its conclusions were accurate enough. The empty look, the pale puffy face, the putty-like nose, the ridiculous black toothbrush moustache, the cow's lick over the forehead—no doubt whatever of the verdict. A

criminal type of low mentality Whenever I saw that face it was *neither hatred nor even contempt which moved me it just* made me feel sick, I have often asked myself whether this wasn t violent prejudice, surely there must be something more than that in a man who was idolized by millions of Germans as no man had ever been idolized before. I often did my best to remain coolly objective and find something or other to account for this shameful fact, but try as I would I never did find anything

I once went to the Sport Palace to hear him speak. I had a seat right up close to the platform in a place reserved for the Hungarian Legation and for an hour and a half from this point of vantage I closely observed everything that took place. The production, so to speak, was perfect. Many a theatrical producer could have learnt a trick or two from it. Everything had been done to whip up the feelings of the audience to the proper ecstatic level even before the performance started. A collection was taken in boxes under the bright slogan 'For the one way street to Palestine Brass bands played fortissimo big drums were flogged and trumpets blared. From outside the high pitched wail of police-car sirens could be heard, underlining the general suggestion of importance. The loud speakers announced the names of prominent members of the party as they arrived and each time a roar of applause greeted them, varying in volume and length according to the popularity of the great man. They arrived one at a time, obviously in order to give the mob the opportunity of howling its head off and keeping its spirits up

Finally the vast hall was packed with something like ten thousand people, and the platform was filled with Nazi notables. This was apparently Goebbels cue, and he took the microphone to inform the plebs in a dramatic voice that the *Fuehrer* was on the way Then every few minutes, in a death like pause as the bands stopped playing suddenly Goebbels announced the progress of the great leader towards the meeting After that the music blared out again. Then it stopped suddenly and Goebbels excitedly informed the audience 'The Fuehrer is near More music. And then Goebbels announced in a voice thrilling with simulated excitement 'The Fuehrer

has entered the Sport Palace The whole audience was reduced by this stage trick to a state of tingling nerves and expectation and then dead silence was broken by trumpets sounding a fanfare And there he was a flabby, narrow-chested unimpressive little man with furtive eyes his left arm hitched into his belt and his right arm raised from the elbow in a jaded sort of salute, not vigorously stretched to its full length with hand extended but just vaguely waving He mounted the platform. He was pale and obviously under stress, but he had himself well in hand. Before him were many pieces of paper with short, slogan-like notes clearly written on them in letters inches high

He began in a flat, monotonous voice and then gradually worked up to breaking pitch It was all being done with a carefully studied microphone technique. The hysterical crescendo was obtained more by leaning closer to the microphone than by the power of his voice. He approached the microphone or withdrew from it according to his requirements. His sudden demagogic outbursts of rage at an artificial climax were made to sound as though he were thrilling with pent-up emotion, but that was not the case He stood there just as flabby and nerveless as when he arrived. He gesticulated only from the elbow and the upper arm remained close to his body There was no inner tension whatever The fingers were not stretched or closed into a fist. Everything was pure calculation Everything he did was carefully studied beforehand, thought out and deliberately acted The speech was not improvised. He was not carried away by the surge of his own oratory There was not a trace of excitement. I left the wretched scene dissatisfied Once again I had found nothing of the demon about Hitler He was the suggestion of his party bosses, just as the film star is the ballyhooed suggestion of the producer

And this was the pitiful wretch who forced Einstein to leave Germany I don t think the great protagonist of relativity left with any very keen pain in his heart. He was happy in his little house at Caputh on the Havel and he liked the company of the artists and scientists who gathered around him, but nothing could bind him any longer to this nationalistic arrogant, spiritually and morally degenerate Brown Germany

He liked and admired the English, but it was the French temperament which appealed most to him. In free America he found peace again—but happiness? I hardly think so The English seem to him attractive and rather childish the Americans attractive and rather infantile. But it is the fantasy of the French which really draws him. However he would feel at home anywhere in the world because he is a true citizen of the world—a *Weltenbuerger* in fact.

CHAPTER XX

FRITZ HABER, EHRENFEST JOFFÉ AND OTHERS

FRITZ HABER THE producer of artificial fertilizers from the nitrogen in the air of poison gas and of many industrial ersatz materials, was accustomed to being widely consulted He was well informed either directly or indirectly concerning war preparations everywhere. He himself was a pacifist and a humanitarian whose ideal was to serve humanity not aid in its destruction and he abominated war Not only was he a philosopher and something of a poet as well, but as a dialectician he was brilliant and as a talker fascinating He was a man of considerable fantasy but he never left the firm bedrock of the natural scientist. He suffered from diabetes insipidus, and his sickness compelled him to drink over twenty quarts of fluid daily I knew him from the first symptoms of his sickness, and at the time of which I am speaking it was not yet acute.

Fritz Haber was a Jew and consequently he was not particularly welcome in Berlin even in Wilhelm s day so he went to Karlsruhe instead, where he was engaged at the Technical High School. The Berlin banker Leopold Koppel took over the insolvent Auer Company and his financial genius succeeded not only in popularizing the inventions of Count von Auer but in developing the company to unprecedented prosperity The gas mantle and rare-earth alloys soon found their way over the whole world. Who is there to-day who hasn t heard of the incandescent gas mantle, the Osram lamp and the flint in his

pocket lighter? The young physico-chemist Fritz Haber had a lot to do with this success.

Koppel was a man who disbursed enormous sums for charitable and other enlightened purposes, a sort of Lord Nuffield of his day but his gifts were invariably calculated with more than one object in view and they served many interests, including his own. He financed the founding of the Kaiser Wilhelm Institute for Physical Chemistry with a donation of no less than a million marks and made it a condition that Fritz Haber should be its director With this he killed at least five birds with one stone first of all he had the satisfaction of installing his coadjutor Fritz Haber in Berlin against the opposition of the University stick in-the-muds secondly he was able to reward Haber for his very valuable services thirdly he placed a new branch of science on a sound and generous basis fourthly he had his important adviser Haber always close at hand and finally the Kaiser presented him with a high order for his generosity to the cause of science. Both the useful and the agreeable were well served.

The project, the execution, the organization and the curriculum of the new institute were discussed by Koppel with Haber and me on an automobile tour through South Germany in Koppel's new Benz roadster a very unusual machine in those days. Both of them did their best to persuade me to abandon my medicine in favour of physical chemistry and to join the new institute, but I refused At that time, in 1910 physical chemistry was still in its infancy though its basis had been fairly well defined by Wilhelm Ostwald and Svante Arrhenius. Haber's powerful imagination foresaw the future with extraordinary accuracy He experienced it in his brain before he proceeded to put it into practice. His knowledge of general principles was as sound as a rock and on it his imagination built rapidly He had little or none of that detailed knowledge which can so easily weigh down the daring flight of thought. Despite the enormous development of science there are comparatively few facts which belong essentially to the equipment of the pioneer scientist. The greater the problem to be solved the less formal knowledge of details is necessary to arrive at its theoretical solution. The smaller the problem the more detailed

knowledge is necessary A compendium is sufficient for genius. All it needs is a knowledge of first principles It is capable of providing the rest for itself, of developing, or denying and building afresh. In the dissertations of leading scientists on highly important themes detailed bibliographies and a learned apparatus are seldom to be found, whereas subordinate spirits with less to say and that on a less important subject usually wallow in bibliographical details and innumerable quotations from other people's work. Haber was a genius he kept assistants for any detailed knowledge he might need, much as in the days of classic antiquity the well-bred Roman was always accompanied by a highly educated Greek slave who walked humbly in the rear and was there to be consulted on any point on which his master required enlightenment a lexicon of flesh and blood a memory without a mind a statistical annual on two legs. In this respect Haber always had what he needed to hand. His own ideas were explosive like rockets.

Whoever has great ideas will invariably make discoveries which others have already made in different ways Two-dimensional geometry will never approach the practical significance of Euclidean geometry but it is the loadstone for the truths and errors of three-dimensional geometry And thus every new idea is a loadstone for the accuracy of 'Facts which have been previously established And when a new idea has been born clouds of scientific blow-flies descend on it, until the origin is almost if not quite concealed

Fritz Haber was a blood Silesian, the son of a well to-do father, who was President of the Chamber of Trade and leader of the Jewish Community in Breslau Men who went to school with him have described Fritz Haber as being a fine athlete in his youth. In his later years he was not even a caricature of his youth. Time and an inexorable fate had altered him out of all knowledge. The years, cruel sickness and hard work had taken their toll his dolichocephalous skull was quite bald his nose had obviously lengthened he was short-sighted which made him peer and the legs supporting his heavy body seemed to have got shorter His hands were square with short almost equi-long stumpy fingers—the type of hand that, almost without exception all great thinkers and artists possess. His nature

was inclined to be Bohemian, and he enjoyed all the pleasures of life to the full but he included hard work amongst them. And although in later years he often suffered from pain and exhaustion he did everything to prevent his troubles from worrying others During the final years when he suffered much from angina pectoris not even his close friends noticed his frequent spasms, for he steadily deadened them with nitroglycerine capsules which he swallowed one after the other as though they were sweets. He was a sensitive and in some ways even a sentimental man, and he suffered deeply at the injustice done to his fellow Jews. As a Jew he could not be an officer (anti-Semitism in Germany was not invented by Hitler) and in the ordinary way he rose no higher than a sergeant—quite a brilliant military career in the circumstances but during the first world war they had to make him a Captain but that was exceptional promotion for very good reasons the ruling clique needed his services badly

When war broke out in 1914 the German military authorities reckoned on a short sharp campaign and their reserve stores of explosives were sufficient to last until February 1915 only After the first few weeks of war it became quite clear that the thing was going to last, and the short-sighted gentlemen of the High Command were in a quandary because the British naval blockade practically cut off the import of saltpetre from Chile The situation was desperate, and their first hope was a process invented by another outsider the Jewish Austro-Polish chemist Caro for manufacturing potassium nitrogen However turning this into explosives was a cumbrous and costly business and it proved impossible to meet all the growing needs in this fashion.

Haber saved them—quite unintentionally In the autumn of 1914 he turned nitrogen gained from the air into ammonia, the fertile source of explosives and changed the course of history—then and now Without that it would have been impossible for Germany to carry on much beyond the spring of 1915 Haber's scientific object was not the production of explosives but of artificial fertilizers from the air It was a pet idea he was putting into practice and his aim was to improve the fertility of the earth The idea that his discovery might be used for destructive purposes never entered his head

Assisted ably by Carl Bosch who was at that time Director of the Baden Aniline and Soda Works, and an engineer and technician of great brilliance, Haber succeeded in bringing about the first amalgamation of nitrogen from the air and hydrogen It was done under high pressure with an electric spark and a catalysator Incidentally the actual successful experiment was quite a tragedy for Haber and it took him a long time to get over his disappointment He had already made many experiments unsuccessfully and had prepared everything for this new and as he believed decisive experiment and had then gone out to lunch. In his absence one of his assistants performed the experiment. It was successful and when Fritz Haber returned there was the little heap of ammonia salts in marvellous crystallized form at the bottom of the test vessel. Manna had fallen from heaven and poor Fritz Haber had not been there to see

At the same time humanity had been granted a new boon thanks to his genius. But the beast in mankind in the shape of the High Command pounced on the discovery and used it to evil ends. As soon as the experiment had left the laboratory stage and the process was ready to go into mass production the famous Leuna works were founded. The first buildings, with enormous apparatus installed by Bosch, were ready within six weeks—and the world war could go on—thanks to the humanitarian impulse of a Jewish sergeant named Fritz Haber

Haber was rewarded with the Nobel Prize for his discovery Now the conditions under which the Nobel Prize for Chemistry is awarded provide that the candidate shall have made some new scientific discovery of note as Fritz Haber had done, or have constructed apparatus permitting new chemical combinations. Some years later on the basis of the latter provision, Einstein and I proposed Haber s loyal helper Bosch for the Prize. It was granted to him, but he had to share it with Professor Bergius, who had been put forward on account of his process for the hydrogenation of coal.

The effects of Haber s discovery were disastrous, but the use to which another of his discoveries was put was in some respects still more tragic the production of poison gas. Like Wilhelm II at the beginning of the war Haber might have ejaculated "I

did not want this! and with far more justification. Once again Haber's aim was to assist agriculture, this time in the negative form of a speedy and economic method of destroying agricultural pests He had already made many promising experiments with halogenous gases such as chlorine, bromine and fluorine, when the High Command and its experts conceived the idea of using such gases for war purposes. Once again the pacifist and humanitarian Haber was made into a sort of inverted Mephistopheles the force that always willed the good but always created evil. He was an apostle of peaceful progress with the aid of science. He wanted to enrich the peoples with the aid of artificial fertilizers and more efficient insecticides, and instead of that he unwittingly gave the beast in humanity new ways to torture and to kill

After a Directorial Board meeting in Frankfort-on-Main in the summer of 1930 I motored back with Haber to my house in Koenigstein in the Taunus. The clouds of crisis were already gathering over Germany and we discussed the possibility of new wars. I mentioned one arm after another in order to find out which in his opinion was likely to play the decisive role in any new war the aeroplane the tank, the submarine heavy artillery poison gas No, none of them. Finally I grew impatient as the list was exhausted and declared petulantly "Well the devil take it, what will decide the next war then?" And Haber turned to me and reproached me bitterly for being with the fools who thought new weapons decided wars "The next war will be won just like the last by the side which has the better and nobler ideas

One of Haber's ideas was to pay off all Germany's reparations debts with gold to be obtained from sea water He had made considerable progress towards its realization worked out the various processes and constructed huge apparatus—when, checking over his facts again, he discovered that unfortunately he had made a decimal point error in his calculation of the auriferous content of the water It was a great shock to him and it cost him a nervous breakdown We went together to Bad Gastein where he gradually recovered By the time he landed in England in 1934 as a refugee he was heartily glad that he had failed and not once again assisted Germany He

was a deeply disappointed and embittered man, both sick and tired and he did not live long in exile. He died in Basle of his old angina trouble and was buried there.

Unfortunately I never had an opportunity of meeting Professor Lorenz of Leyden but Einstein introduced me to his successor Paul Ehrenfest, and we became good friends He radiated good humour and cordiality of the real old Austrian school but he was also a brilliant scientist whose keen eye missed nothing a man of quick perception and tremendous ability Usually the great intellects of the world are encased in imposing foreheads broad high and nobly shaped. Paul Ehrenfest was exceptional in this respect he hardly had a forehead at all, and a thick black mop of woolly hair almost came down to his eyebrows. It looked for all the world like one of those cheap wigs which are clapped on to the skulls of supers when they represent Roman gladiators. Paul Ehrenfest certainly looked neither like a man of outstanding intelligence and ability nor like one who had been marked out for tragedy but in both respects appearances were deceptive.

He had a son, a half-grown lad whom he adored The verdict of the oculist was frank, brutally frank blindness was inevitable. It proved more than the father's heart could stand. Paul Ehrenfest put a bullet through his son's temple and then through his own. The father died but the son lived on—with the visual nerves of his eye destroyed Ehrenfest's widow returned to Russia, where she was given the chair of mathematics at Minsk University

Another professor of physics whose acquaintance I made through Einstein was Felix Ehrenhaft who held the chair of experimental physics at Vienna until the Nazis came to power when they robbed him of everything he possessed, including the great electro-magnet he had constructed turned him out of his laboratory and forced him to leave the country He was the amiable unworldly type of professor who lived only for his work, at which he was extraordinarily capable, particularly in experimentation. It is difficult to say in which respect he was more reliable as a scientist or as a human being and a friend. He came from a medical family and his father was a well-known practitioner in Budapest. In the ordinary every-day

affairs of life he was a good natured pacific type, but in scientific affairs he was a fighter of determination and bull-dog persistence. When he had good reason to believe himself in the right he didn t care if the rest of the scientific world thought him mad and no array of professional might could intimidate him. His pet theme was magnetophoresis Magnetolysis was opposed by all his colleagues—and he fought them all I don t think there was ever a scientific experimenter of greater conscientiousness and thoroughness than he was, and his results and his facts were marshalled with such skill and at the same time with such simplicity that anyone could understand and test them. What remained in dispute in his work was not his facts, but the interpretation to be placed on his experimental results In that his colleagues would not see eye to eye with him He insisted that his measurements proved that the electronic charge was not constant, as was generally assumed. In this he had hardly a friend to support him and he made many enemies

Science is supposed to be unprejudiced and impersonal. Science is, of course but unfortunately many scientists are not—or most of them are not, and an attack on what they are convinced is true—particularly in fundamentals—invariably arouses feeling rather than thought. Felix Ehrenhaft had no easy task.

Another good friend of mine amongst the mathematicians and physicists was the Russian Abraham Joffé (not to be confused with the Joffe who was first Soviet Ambassador to Germany) De Broglie was the first to discuss wave mechanics though in a rather confused form, but it was Joffé who made the first thorough studies and drew the first sound conclusions on the subject. Joffé has all the strong points of his nationality He is good natured, cordial modest and loyal. His intellect might be said to work like a Yale key just as the latter sets into operation a whole complicated mechanism and solves the problem with one movement, so his brain used the simplest ideas to solve the most complicated problems. His thought processes are crystal clear in their operation, and it was always a striking experience and a great pleasure for me to listen to a discussion of physical phenomena between him and Einstein I

had the impression from their talks that there is nothing so complicated in the vast realm of human thought that it cannot be made clear to anyone of ordinary intelligence. Such discussions were never conducted in abstruse and complicated scientific jargon, but always in ordinary every-day words and examples.

I have always felt that simplicity was the hallmark of truth and that a theory which was difficult or impossible to explain must be wrong. It is usually ideas which have not been thought out to their logical conclusion which are difficult to understand. The nearer the idea is to its completion, the nearer it approaches to truth, the more easy it becomes to understand. I was never more convinced of the correctness of this view than when I listened to Einstein and Joffé discussing problems of physics.

On one occasion four of us were on our way to a favourite little restaurant of ours: Einstein, Joffé, Gruenberg and I. Gruenberg and I were walking on a little ahead, and behind us we heard the voices of Einstein and Joffé rather more raised than usual, and then Einstein burst into a roar of laughter. We stopped and waited for them to catch us up to find out what the joke was about, and Einstein explained: "Poor old Joffé can't make up his mind through which hole an electron will go if he fires it through a lead obstacle with a number of holes. An electron is indivisible, and therefore it must go through one hole only. But which hole? And the solution is really very simple. It goes through the fifth dimension."

Joffé was entrusted by the Soviet Government with the development of energy in Russia, and for his great work in this respect he was awarded the Stalin Prize. He started off his scientific life as a medical man, and his first researches concerned olfactory problems. He assured me that all his subsequent work derived logically from this first interest in the sense of smell. After the conclusion of his studies in Russia Joffé went to Wuertzburg to work under Roentgen. During the first world war he was professor of physics at the Petersburg Polytechnic. After the collapse of the Czarist monarchy he threw in his lot enthusiastically with the revolutionary regime and he served the cause of the Soviet Government with unwavering devotion. In return he was highly thought of by the Government and very

popular amongst the people. It is typical of Soviet Russia that scientists, poets, dramatists, writers, painters and composers enjoy a widespread popularity reserved in other countries for heavy weight boxers, and such-like capitalist celebrities.

Joffé's theoretical knowledge of physico-mathematical science is enormous, and at the same time he is a very able practical experimenter. I should say that there is no field of practical physics which has not been enriched by his work. Of course, it must be remembered that everything requisite is placed at his disposal without cavil. He is in charge of about forty institutes and has as many assistants as he needs. His intellect and his activity are all-embracing. If apparatus is necessary to protect low-tension wires from the influence of high-tension wires, if thick cables must be replaced by thin wires to do the same work, if a new process is required to impregnate material, or a new method to induce quicker growth in trees, or the citrus harvest requires improvement, or apparatus has to be built for the production of powerful wind in a confined space or an accumulator for solar heat is required, or an investigation of 'vital rays' given off by dying plants to stimulate the cell division—no matter what it is it first goes to Joffé and is worked over in his mind after which the practical experiments necessary are made by his hands, and the final work is then completed under his guidance. His manual dexterity is extraordinary, his capacity for work enormous, and the elasticity of mind which permits him to switch from one task to the next astounding.

One might imagine that such a tremendous performance left Joffé time for nothing beyond his science, but that is not the case. He never seems tired, never complains that he is over burdened and always has time for whatever he feels inclined to do. He has time to live and enjoy it: he reads a lot, and not all he reads is deep and scientific. On the contrary, he is very fond of Conan Doyle and Edgar Wallace. Sherlock Holmes is a very real personality for him, and when he came to see me in London his first wish was to go to Baker Street (an unsuccessful pilgrimage performed by so many) to unearth the home of the great detective. Joffé was disappointed to find nothing but a respectable shopping thoroughfare, no doubt it has altered considerably since Sherlock Holmes's day.

Joffé is one of those well-balanced men who can if need be do without everything except the fundamentals of life—and without complaint. But at the same time he is not the man to refuse any innocent pleasure that comes his way. Another thing—important from my point of view—he was a good patient. He always did as he was told and I never had any difficulty with him. War and revolution have separated us, but our cordial relationship remains unchanged. His pupil Kapitza was a living bond between us as long as he remained Director of the Mond Laboratory in Cambridge. We used to meet occasionally too, particularly as Joffé was chairman of the Solveigh Committee and his duties took him to Brussels from time to time. However, in October 1938 a congress of physicists was held in London, and a young Russian mathematician and physicist named Gamoff was sent to read a paper as the representative of Soviet science. It appears that both Joffé and Kapitza stood guarantors for his good behaviour and his obedient return. But once outside the Soviet Union Gamoff refused to honour his pledge and go back. The result was that Kapitza, who was in the Soviet Union at the time, was not allowed to return to Cambridge and Joffé has never left the Soviet Union since. Not even the powerful intervention of a Lord Rutherford could persuade the Soviet Government to alter its decision and let Kapitza leave. Let me say quite definitely at this point that no information on the subject has come to me from either Joffé or Kapitza, and that the above version is entirely my own.

CHAPTER XXI

THE BALTIC STATES, FINLAND AND RUSSIA

In 19^8 I went to Russia, and on the way I visited the Baltic States and Finland, where I delivered a number of lectures and used the opportunity to study the medical institutions of Riga, Reval and Helsingfors. By that time there was no longer any difficulty about travelling, and a regular sleeping-car service went from Berlin as far as Riga.

The Baltic peoples are a Slav-Teutonic mixture in sentiment they are Slavs and in intellect Teutonic. In their ways of living they are wholly Russian, but their culture is German. The Baltic States are a sort of watershed between European and semi-Asiatic culture These small peoples really are connecting links between two continents. Many contradictory currents meet in the Baltic States and innumerable eddies and swirls are formed As long as the Baltic Barons were politically dominant, as they certainly were until recently there was little chance of any social changes, and a sort of virgin feudalism still prevailed. In their hearts these peoples still yearned for old Russia, feudalist Mother Russia, in whose bosom they played an important intellectual role Since they have had to stand on their own legs they have felt insecure and unhappy They firmly believe they enjoy the benefits of a double culture but I was sometimes tempted to wonder whether it was only two halves

From what is now Leningrad right through almost to Mecklenburg Germanic culture was fructified by Swedish influence This influence extends south as far as Vilna and then along the Prussian frontier and it is interesting to experience the razor-sharp line which then separates North-German from South German culture.

The Baltic States are rich in natural produce, but they are unsuited to an independent political existence and they have always struck me as a caricature of big States—something like megalomaniac dwarfs. They have to have everything the big States have, whether they need it or not, and particularly an army—and a navy as well if they happen to have a coastline—diplomatic representatives in every capital and all the rest of it. Throughout the twenty years of their independence not an influential voice was raised to urge them to moderation in their ideas The Latvian Fleet was typical of what I mean. I happened to be in Riga on the day when traditionally the naval cadets took the oath to the Czar After the revolution of course, it was taken to the Latvian President It was still a great day The whole fleet consisted of two old cruisers, which I was told were incapable of moving under their own steam and had to be dragged and nosed around by tugs and a number of obsolescent torpedo boats. There was of course, an Admiralty a

Lord High Admiral and his Staff, a training school etc and so on.

After the taking of the oath there was a celebration in the evening to which I was invited. The well born youth was present in large numbers, as this was one of the rare opportunities for social equals to meet. There were titles everywhere Countesses and Baronesses galore in ball dresses manufactured with love and care out of all sorts of tulle remnants. The contrast between their poverty and their dignity was quite tragic and a little touching Vodka was the only drink and everyone smoked Russian cigarettes, one after the other A dance band played and the floor was crowded. After midnight coffee and cakes were served, and many of the guests opened up packets of sandwiches they had brought with them. But there was nothing wrong with their spirit, and the atmosphere was warm and gay The dancing couples enjoyed themselves hugely and there were constant bursts of laughter But by the early morning as is usual at Russian gatherings, a melancholy gradually descended over the proceedings The air was blue with smoke and heavy with vodka fumes, and the sentimental minor key of Slav songs dominated the descending mood until the guests hummed rather than sang the melodies. Everything lay around in disorder on and under the tables, and in the corners the beauties of the evening were nodding sleepily their hair a little out of order and their ball dresses a little creased and ruffled. Other guests stared into nothingness and seemed to be mourning bygone glories and sighing hopefully at what the future might bring whilst the orchestra played long-drawn-out gypsy strains.

The whole life of these little States seemed to me to be something like that evening a dreaming of a happier past, a sleeping through the present, and a hope for better times in the future. There was something of the tragi-comic opera about it. It was reminiscent of *papier-maché* and theatre scenes, something unreal. I came away with the conviction that these little States were incapable of a happy independent life. They needed a place in some strong efficient and homogeneous organism larger than themselves if they were to live at all. Culturally and historically as I have said they are Germanic ethnologically they are Slavs, just as the East Prussians are, the Pro-Russians, Borussians,

Prussians That is true of their whole mode of life, customs and morals. That happy and yet rather tragic evening was in Riga, but it was very little different whether the town was Riga, Vilna, Reval or Dorpat. One little pocket State was jealous of the other one town envious of its neighbour one family distrustful of the next. And everywhere there was dissatisfaction, and nowhere any real community feeling

The most comic phenomenon of all was perhaps their desperate search for and insistence on, some sort of historic justification and even more than that, some sort of historic justification of their right to dominate others. Old ancestral figures were dug out and dressed up as national heroes to flatter the vanity of their descendants, themselves incapable of making history or doing anything more than despairingly marking time in memory of past glories.

The situation in Finland was very different. Here was a vigorous people, with a real feeling of national unity and a tenacious hold on their racial community which no periods of slavery and subjugation had been able to destroy In some respects the Finns are like the Hungarians Both peoples moved from the uplands of Iran to the west so to speak in the rear guard of the great migration of the peoples, both found them selves hemmed in between Slav and Teuton both fought with fanaticism and persistence for their independence and both have maintained their precarious European position for over a thousand years. They seem both to derive from Ugrian ancestors, and to the philologist their languages are said to show remarkable root similarities This may be so but I could find no practical similarities which might have helped me.

The political histories of the two peoples are certainly analogous. Both had comparatively short periods of freedom generally they were subjugated without being absorbed. The iron physical law of action and reaction applies both on the political and the social fields. Peoples can be assimilated in freedom but through oppression they grow stronger Both Finns and Hungarians have a similar cultural history and both are unable to recognize that their cultural value resides in the fact that they are assimilators of still higher cultural influences. Both now suffer from chauvinist blindness and are excessively

conscious of what they call their "cultural mission" And both are equally ungrateful to their teachers the Hungarians to the Austrians and the Finns to the Swedes. Both of them have discovered an *ad hoc* national art, and both refuse to see that their art was developed by modification from the arts of their teachers. Of course, the teachers did not give all naturally there was interaction as well as action. The ridiculous thing is only that these little people in their foolish megalomania are trying to pretend that they owe no one anything and that everything is the result of their own efforts alone

The Finns are a peasant people. Even under Russian political dominance their teachers were still the Swedes, and their literary language was Swedish, as that of the Hungarians was German. It was these two languages respectively which were their keys to the world of scientific knowledge. But gratitude amongst nations is like gratitude amongst individuals it is an embarrassing matter Neither Finns nor Hungarians are prepared to forgive their benefactors. Whilst I was in Finland the hateful atmosphere of national chauvinism was particularly irritating As far as the nationalistic rulers of Finland could manage it, every trace of the country's Swedish past, including place and street names, was being erased. Nationalism dominated the school curricula Swedish professors were banished from the capital into lonely country places Finnish text-books were hurriedly printed in great numbers to replace the old-established Swedish ones and the name of the capital was changed from Helsingfors to Helsinki, and so on.

The Finns in their national pride were not satisfied with one *bête noir* Bolshevism, and Russia in general was another one. The word Russia itself was banned. Blind hatred and reckless Xenophobia were deliberately inflamed, and that to a greater extent than I had ever experienced it elsewhere up to that time The old intellectual classes had been driven out of public life, and the peasants and the lower middle class ruled the roost. To prove their title and show their energies everything in the towns was ultra modernized and over-proportioned. Of course, much that was done was fundamentally good, because the Finns, once again like the Hungarians, are a talented people. The general impression of modern Helsinki like that of Buda

pest, is good. The buildings are fine, and the streets and public places are well laid out, *but just as in Hungary, everything lacks* proportion—these little would be great people easily over reach themselves. They build up an impressive façade, but look behind it and the picture is very different. Nowhere is this truer than in Finland and Hungary. The Houses of *Parliament in Budapest, for instance,* are bigger than those *in* London—and of course, cost much more to build. But, on the other hand there isn't a decent hospital properly equipped in the place and the same is true of other public institutions.

Despite the necessity of these sharp criticisms I liked the *Finns,* as *I like, and more than like* the Hungarians and I wished them well. I only hope that they will soon get over their hateful attack of nationalistic self satisfaction and grow naturally into their over sized institutions.

After I had delivered my lectures in the University and before *the old-established medical association 'Duodecim'* I stole away at night and left for Leningrad without farewells—it is not considered the thing in Helsinki to talk about Bolsheviks with anything but contempt and hatred—and as for going to visit them.

What struck me most on the way from Helsinki to Leningrad was the general air of orderliness and the efficiency. The railway carriages were in good condition and they were kept very clean but the station buildings and the uniforms of the railway personnel were in a very shabby state. The railway buffets used to be famous for their delicacies in Czarist times but now they were depressingly bare. There was absolutely nothing to be had except boiling water for making tea, but I had no tea and nothing to make it in. Fortunately a Dutch fellow traveller —more cautious, or more knowledgeable than I was—had brought a hamper of things with him and he took pity on me and made me his guest for the journey. In contrast to the sad lack of every creature comfort was the gay spirit of my Russian fellow travellers. *They laughed and they sang* and when the halts at the stations were long enough they even got out and danced.

The examination of passports and baggage was protracted and tedious. Every little scrap of paper with printing on it was

closely looked at and turned over and over and nothing was let through. Every item of clothing was carefully listed. All foreign money in our possession was taken away and the sum and the currency noted in our passports. Anti Bolshevist propaganda asserts that all this care is merely a blind and that no one ever sees his property again but all I can say on the subject is that when I left Russia everything was returned to me without question. Those who systematically slander the Soviet Union seem to forget in their short-sightedness that when the slandered is proved innocent he enjoys more sympathy from the just than he ever enjoyed before.

Whilst in Soviet Russia I was able to buy various commodities, such as tobacco wines, spirits and delicatessen, not available to the ordinary Russian folk. Such goods could be purchased only with foreign currency which I was able to obtain from the State Bank against the dollar sum noted in my pass.

The strictest control concerned the Russian rouble, and the reason for that was clear enough The counter revolutionary movement, whose centre was in Paris, had succeeded in smuggling enormous sums in rouble notes out of Russia, chiefly over the Persian frontier They had been purchased at a fraction of their face value and naturally enough their quotation on the European exchanges was very low I remember when I told the famous Russian actor Moskin that Russian roubles could be bought on the Berlin exchange for 90 pfennig as against a face value of 2·20 marks he laughed sympathetically and said how sorry he was for the Germans if that was all they could afford. In any case the Soviet authorities took drastic measures against rouble smuggling, which was, of course, intended by the counter revolutionaries to undermine the stability of the Soviet currency I had already some idea of the frontier difficulties and I had therefore taken nothing with me but what I actually required the things I stood up in and the necessary changes—consequently I had no trouble.

Whilst I was in Moscow I went with my friend Migal, the most famous baritone in Russia and a deservedly popular artist to a concert for workers on the fifth holiday (Sundays had already been abolished) I have been to all sorts of official and unofficial receptions in Soviet Russia, but I have never

seen a guest in evening dress. It is, however another mark of the great respect in which both art and the artist are held in Soviet Russia that artists always wear evening dress Migai was therefore in evening dress. It was well cut and well fitting, but the material though originally good was by this time a little threadbare However the general impression was excellent except that the shirt front was held together with wire. Soviet Russian industry had already got as far as tractors and capstan lathes but evening-dress studs were not produced. I was able to present Migai with two artificial pearl studs of very trifling value. They filled him with joy and his gratitude was enormous. To show me his thanks he demonstrated for me the whole development of the Russian ballad from 1800 to 1920 and he got the conductor of the Grand Opera to accompany him at the piano His audience consisted of four people the Russian actor Katschaloff Moskin Migai's wife and myself We sat silent and deeply moved in the candle-lighted room and listened for three hours to one of the most wonderful ballad concerts I have ever heard from Glazounov and Borodin to Rachmaninoff and Rimsky Korsakoff

Migai was a great artist. His voice was of tremendous volume and incomparable tone, and produced from the powerful chest of a Tartar He had deep-set eyes under bushy eyebrows, a high forehead, a mane of black hair and very expressive features which were never distorted by the effort of producing his powerful notes. Equally popular with Chaliapin, his art and his voice can be compared with those of the better known singer Neither experienced any technical difficulties in producing his tremendous voice, and both were completely masters of their material Europe had an opportunity to know and appreciate Chaliapin *it is a great pity that it never knew Migai.* It is a source of great satisfaction to me to have had the privilege of hearing him, and it will remain a happy memory

When I finally returned to Berlin after a visit which lasted some months I found my chief source of irritation in the know alls who immediately discounted every word of first-hand evidence on the ground that the witness, myself in this case, was not competent to form an objective judgment on what he had seen because the Soviet Government allegedly showed only

what it wanted to be seen and concealed all the rest This prejudiced and very stupid objection was quite useful to the Soviet Government, which never went out of its way to reply because it helped to conceal those things the Soviet Government most certainly did not want generally known namely the secrets of its development. What the Soviet Government did keep a very close secret was the planning and organizational structure of its industries, but what anyone with half an eye who had anything to do with the Soviet Trade Missions in any foreign country could see for himself was that no field of development was neglected

Up to the invasion of Soviet Russia by the Nazi barbarians (and even for some long time after it) the distrust of the Soviet Union was so widespread and the disbelief in its increasing strength so firmly entrenched that no one in authority in other countries considered it worth while looking into the matter systematically And yet it would have been easy enough to control every move in Russia by an international exchange of information and a little inspired deduction. The Soviet Government was a master at playing off one purveyor against the other so that far from exchanging information on matters which interested them all, they played the Soviet Government's game of mutual concealment and confusion. A factor which tremendously assisted the Soviet Government in its attitude was the firm conviction of all other countries of their tremendous superiority over the Soviet Union and their contempt for its efforts. They treated Soviet Russia like a poor relation who was expected to be satisfied with any old thing they liked to palm off on it.

In the beginning it is true, the Soviet Government was in a very unfavourable position and often had to accept inferior deliveries because it was not in a position to do otherwise, but that gradually changed, and before long it began to insist on—and to obtain—good value for its money much to the indignation of many of the purveyors, discomfited at the stopping of their swindling tricks. Once the Soviet authorities were able to obtain good machinery they began to employ highly paid specialists to help them exploit their own natural resources, and finally they obtained the very latest machine tools and

equipment and on that basis they developed the necessary labour and engineering technique to master them and make their own But the one thing above all others which gave them an advantage in that battle was the burning interest their own people showed in the great experiment, and the tremendous labour enthusiasm which developed in consequence. Whilst I was in Moscow I had a personal experience of this I had been invited to dinner in the house of my old friend Joffé. After wards we were to go to the opera to hear Migai sing in Eugen Onegin We had finished dinner and were putting on winter coats and galoshes in preparation for the walk to the Opera House, when a deputation of young men was announced Joffé had already done a hard day's work, and wondered what it was they wanted of him, but after telling us he wouldn t be long he disappeared with the young men (all between the ages of eighteen and twenty) into his study

He was wrong and we waited and waited It was a good hour and a half before he reappeared and the young men departed. Joffé apologized but explained that after all it had turned out to be a matter of some importance The young men had come to know whether he could give them any advice. It appeared that the *casaus* β of their factory was not so favourable as that of a near by factory and they wanted to know why and how they could improve matters. None of us knew what a *casaus* β might be and Joffé explained that it was the coefficient of expended energy and production He told us that he had examined all the details of their calculations observing incidentally that the young men had known what they were talking about, and after they had answered all his questions and he theirs, they had entered into a detailed discussion as to what could be done to bring the coefficient of their factory up to that of their rival

That was typical of the Russian attitude wherever I went and whenever I could speak with people on the subject. There was not merely a deep interest in the work, but a positive enthusiasm such as workers in other countries usually keep for exciting football matches Stachanov who gave his name to a whole system a sort of commando system of labour was not merely an individual he was a type. Of course the Russian

workers were perfectly well aware that like all other industrial workers they were 'links in a chain' or 'cogs in a wheel' but they were links and cogs with a personal feeling of responsibility and it was their chain and their wheel whose frictionless functioning was involved

Even in Czarist days the Russian people were essentially democratic in their feelings. I nowhere met less snobbery than in autocratic aristocratic Russia or more than in democratic France. The Russian has always had a desire to be a somebody on the basis of his own performance rather than through an accident of birth or by some trick or swindle The cardinal failing of the old Czarist regime was its inability or refusal to satisfy the deep-rooted Russian urge for knowledge. The first important thing the Soviet Government set its hand to after the seizure of power was to take over all the means of education, create new ones as rapidly as possible, and throw everything open to the people without distinction. It did not keep scientific and cultural values locked up in a safe but brought them out into the light and put them into normal currency That was the real and primary basis for all the progress that followed and it was the chief service of my friend Lunatcharsky to have recognized this and acted on it.

In an astoundingly short space of time Lunatcharsky who was then People's Commissar for Education, succeeded in reducing the proportion of illiteracy in Russia from 70 per cent to 5 per cent with the result that the urge for knowledge burst all dams and everything printed, even in millions of copies, was snapped up almost as soon as it came off the press. I have known a text book on pig breeding to sell two million copies within eight days of publication The reform of the old Russian alphabet including the abolition of certain surplus letters, did much to facilitate the new learning I was told that this reform cost the Government a hundred million roubles to put through, but it proved to be worth every penny or rather every kopeck, of it. But just what the apparently minor changes involved in practice was not seen until the reform was well under way

Whilst I was in Soviet Russia the rudimentary developments which flowered later on were already visible. It is quite clear that this tremendous development could not possibly proceed

without friction and difficulties of all kinds some caused by the sabotage of counter revolutionary elements, others implicit in the magnitude of the task itself and in the ordinary human failings of those who set themselves to carry it out. But all these difficulties were spots on the sun big spots sometimes if you like, and they gave hostile critics something to criticize and grumblers something to grumble about. Whilst I was in Russia I saw important physiological experiments held up for want of the simplest and commonest things on one occasion, for instance there was no magnesium sulphate (better known as Carlsbad salts) to be found anywhere. On another occasion an important electro magnetic invention was held up for want of a steel plate of a certain size And when I finally returned to Berlin one of my first tasks was to buy a quantity of prepared reeds and send them off to Moscow in order that the clarinets and oboes of the Grand Opera House could blow sweetly again.

To-day the magnitude of the development which took place despite all these minor—and many major—difficulties is no longer in dispute the worst enemy of the Soviet Power is compelled to recognize it. But then it was something of an experience for me to meet the well known German architect May and in reply to my amiable question as to how he was getting on, to hear that he had just concluded his share in the building of two new towns for 50 000 and 100,000 inhabitants, and that he was about to proceed with designs for even bigger towns. Soviet Russia was the only place where they were doing things like that. Such a new town in this case a new quarter was the area over the Moscow River, with its great wireless tower an unusually beautiful engineering feat of hyperbolic arches. Moscow was developing so rapidly even then that my chauffeur a Muscovite born and bred, easily lost himself as he had been away for eighteen months and we drove hopefully and a little vaguely around in the moonlight before we finally found our way home.

But when I got home I learned from the wiseacres that the buildings were so hurriedly and badly constructed, that they would soon all fall down just another bluff Well they didn t fall down, but it was certainly true that the outward details showed signs of hasty work doors and windows did not always

shut as well as they should have done there were sometimes cracks in the plaster and stucco the plumbing wasn t all it might have been But what were these things in comparison with the fact that good solid housing was being made available for larger and larger numbers of a rapidly increasing population, and heated housing accommodation at that? True, individuals did not have the housing space Western Europe thinks desirable they lived in very cramped circumstances and their privacy was practically nil.

In fact I think the most unfavourable of all my impressions whilst I was in Soviet Russia was the state of housing The worst sufferers were the former middle-class families who had been accustomed to live in some comfort and were now unable to bring themselves to part with the household goods which reminded them of other and better at least more comfortable days. The rooms in which they lived were more like furniture depositories than living rooms. People slept on the grand piano—and under it pictures were stacked against the wall because the new concrete walls didn t take kindly to nails (if, indeed, any could be obtained) Clothing lay or hung festooned around—wardrobes took up too much room. If a brain worker was lucky enough to have a table all to himself for his work he thought himself highly privileged But that was about as far as privileges went. I visited the homes of quite high officials in Soviet Russia and found that the conditions under which they lived were much the same many of them had 'studies which consisted of a corner of the general living room screened off by a curtain

The food situation was also very unfavourable when I was there. Luxuries could be obtained only by foreigners with dollars to spend (Soviet Russia needed foreign currency badly) For necessities the Soviet housewives had to queue and wait often for hours. Apart from the foreigners there were other privileged persons in this respect those who had the good fortune to work for one of the trusts could buy at their own co-operative stores, where supplies were much better These people represented a new stratum of privileged persons. It seemed that equality was more difficult to establish than fraternity However despite the very real difficulties (and with

certain exceptions in some of the big towns) men and women generally did not look half starved, and certainly not the children The food prepared in public places was not very appetizing but it must have been nourishing

Household goods such as plates, cutlery glasses and washing basins and so on were in very short supply so much so that on one occasion I was given soup in a plate that could not be put down on the table but had to be held at an angle as otherwise half of the soup would have spilled out.

Clothing too was terribly shabby No new clothes were obtainable and everyone wore what he had until it literally fell to pieces Odd shoes and those much patched and repaired, were a common sight, and very many people had no leather footwear at all Clothes were often more patches than anything else. And as for shifts—anything warm served as a shift And at the theatre it was quite moving to observe the attempts the audience had made to dress for the occasion. Blouses and skirts had been made out of the last pieces of reasonably good and cheerful material available even calico had been pressed into service and decorated with bright odds and ends. And the old shabby fur coats, and the moth-eaten tippets and the muffs! But the impression wasn t at all comic one was moved to sympathy—and admiration for the courageous spirit it all showed

An irritating factor which made things worse than they need have been was the maldistribution of such supplies as were available. Irkutsk was I was told on one occasion flooded with more hooks and eyes than the inhabitants could have used in years, almost everywhere else unfortunates were being compelled to fasten up their shirts, blouses and so on with wire—when they could get wire The distribution of food and medical supplies suffered similarly Oh yes, there was plenty to grumble at, but the general standard of living was not lower than it had been. In Czarist Russia 95 per cent of the population had endured a shockingly low standard of living whilst perhaps 5 per cent had enjoyed a high one. It was this 5 per cent that was suffering now The great majority of the population was, on the whole, better off than it had been. But quite naturally most foreign visitors had affinities with the 5 per cent and were

particularly susceptible to their sufferings in consequence their judgment was often biased This, I am certain, accounts for many of the stories of widespread misery and poverty which came out of Soviet Russia.

In startling contrast to the misery of those who had formerly been privileged and were now worse off than the masses, was the privileged position of the military and the munificence shown to the arts and the sciences. I am quite certain that never in world history was so much done for art and science as the Soviet Government did—and still does From the very beginning artists and scientists of all kinds were treated as privileged beings. And this applied not only to their standards of living but also to their liberty Artists and scientists of renown could permit themselves liberties which would have cost ordinary mortals their heads For instance, the physiologist and Nobel Prizewinner Professor Pavlov invariably began his lectures with a political attack on the Soviet Government. His students listened to him politely and without demonstrations and the authorities took no action on the contrary they supported his researches in every possible way and built him a magnificent laboratory for his famous conditional reflex experiments In the end this extreme generosity won over Pavlov and he expressed his gratitude towards the Soviet Government for the unfailing support it afforded all his scientific efforts, and he admitted to me that he could not have hoped for a tithe of it from the old Czarist Government.

How poverty-stricken the University of Berlin appeared to me when I returned! For all current teaching and research one clinic had a budget of 2 500 marks Even a world famous scientist like Robert Koch was unable to obtain the 100,000 marks he needed for his important experiments to establish the difference between the *typus bovinus* and the *typus humanus* of the tubercle bacillus, though these experiments might have proved of fundamental importance in the struggle against tuberculosis. As far as I know they never have been carried out. And whilst I was in Soviet Russia I witnessed Bucharin write out an order for no less than five million roubles on an odd piece of paper which he had in his pocket for quite a different purpose, to found a new institute of physics fo-

In the special Renoir room there is a wax impression of the hand of the artist horribly crippled and distorted by rheumatism, and a description of the whole medical progress of the case

An experience of mine whilst in Moscow is characteristic of the Soviet attitude towards art. I went to a performance of Czar Fiodor Ivanovitch at the Moscow Art Theatre in which Moskin played the title rôle. When the church bells began to sound in the wedding scene I noticed that the audience seemed moved by some emotion There was a nodding and a whispering and a general movement went through the theatre for which I could not account. Afterwards when I went to see Moskin in his dressing room I asked him for the explanation and he told me that the bells had been the real bells of the Kremlin, and that the costume he had worn was the real costume of Czar Fiodor Ivanovitch lent by the historical museum for the purpose.

Another example was connected with the first performance of Schostakovitch's opera The Golden Age Schostakovitch was twenty-two at the time and there was a cast of no less than a thousand. The "ideology" of the piece was apparently a comparison between the degenerate rococco period and the vigour and heroism of young Revolutionary Russia. The walls of the foyer were covered with diagrams showing how the five months of preparation, rehearsal etc., had been spent, includ ing the exact number of hours put in by the orchestra, the actors, the singers, the ballet dancers, and so on, before the piece was finally ready for its first performance. Every stage secret was laid bare to the audience

There is quite a lot to be said both for and against this sort of thing The theatre needs distance no less than painting When a critic once brought his nose near a canvas in his examination Velasquez is reported to have retorted to the critic I painted that picture to be seen not smelt But let that be as it may in Soviet Russia another factor is involved. In one of his moments of ascetic fanaticism Tolstoy had thundered against the frivolity of spending so much time and money on operatic performances when people were starving etc Very well the Soviet Government was anxious to show its citizens that its artists were hard workers like the rest, that the finished

performance was by no means all, and that it represented a very great deal of hard work and no frivolity at all

Private lives cannot be led in Soviet Russia in the same way as they can in the countries of Western Europe. The individual is more subordinate to the community But that is not all disadvantage social institutions, old age pensions, care for the family and in particular for the children, labour compensation and health insurance have all been developed in Soviet Russia to a level far above the rest of the world For instance, right from the very early years of the Revolution working women were paid for several weeks prior to a confinement and several weeks after it, and the child was supplied with a layette by the State.

Amongst the privileged beings in Soviet Russia were the members of the O G P U., as it was known at that time, the former Tcheka and now the N.K.W.D It is no new organization in Russia, but the lineal descendant of the old Russian secret police, the feared and hated Ochrana. Like the old Ochrana the new O G P U leaves people in peace so long as they do not meddle in politics—politics of the wrong sort that is. I for instance, was closely observed, and I was given to understand that my hotel room was efficiently equipped with microphones, but I was never interfered with in the least. The army as I have already indicated, represents another privileged sector of the community In striking contrast to their fellow citizens, the men were excellently clothed and their discipline seemed excellent. I never saw a soldier with a weapon, and most of them seemed to be armed with brief-cases They were either going to or coming from lectures Their training was said to be made up of 75 per cent theory and brain work generally and only 25 per cent physical training, etc. Unlike the soldier of the Czarist Army the Red Soldier was not trained to be an unthinking and obedient automaton, but to take the initiative himself if circumstances seemed to warrant it This principle unusual in those days, of training soldiers to think and act independently seems to have justified itself thoroughly in the late war

In my experience the Soviet Government never indulged in a policy of what has been described as 'building Potemkin

villages"—the smiling façades specially erected by the cunning Potemkin for his imperial mistress Catherine II to approve during her journey through South Russia. The Soviet authorities had sufficient courage to do first things first and damn appearances. Very often I think, they carried this farther than necessary For instance, when I arrived in Leningrad and was met by friends at the station and taken to the Hotel Europa I had the impression that there was something even demonstrative in the way outward appearances were neglected The town still bore marks of the fighting during the civil war but it was surface damage only and in a very few weeks an army of cleaners, painters, whitewashers and handymen could have restored the town to her old brilliance. Leningrad was like a beautiful lady who had met with a street accident. Her clothing was muddy her hair disordered and there were scratches on her face, but all she needed was a good brushing a bath and a little time at her mirror to restore all her old elegance. As it was, first impressions were not generally very favourable for casual visitors The only shop in which they could buy freely—and then only in foreign currency—was a State antiquarian shop, where works of art could be purchased And why there was a shop (never open) on the Nevsky Prospect with an imposing window display of evening dresses and other modern luxuries no one could tell me.

The urban transport system was in a terrible state. The only means of transport, apart from horse droshkies was the tram car though modern Leyland buses were just beginning to appear in Moscow From my hotel, the Europa , to the various university and research institutes was too far to walk and willy nilly I had to take a tram. Every journey was a minor horror No matter what the hour was the trams were always overcrowded, sometimes almost to the point of suffocation You got in at the rear as usual but you had to get out at the front, so that the moment you squeezed yourself into a tram that looked as though it wouldn t take another single person, the purgatory of squeezing your way through to the other end began. You were lucky if you had succeeded in getting there by the time you wanted to get off and when you did finally succeed you were really exhausted unless you happened to be

an athlete used to gruelling physical contests Considering the degree of motorization in the Soviet Union to-day the dearth of cars then seems almost incredible. There were very few indeed on the streets, and they all belonged to very high officials and statesmen, or to some institution or the other

It was a tram journey such as I have described which brought my visit to Soviet Russia to an end sooner than I had intended. After a two-hour lecture in an over heated hall I went back to my hotel by tram That same evening I stood up manfully to a banquet with endless speeches (they did end of course, but whilst they were going on there seemed no hope whatever) but in the middle of the night I woke up trembling with fever Everyone did his best for me, my colleagues and my friends, and even perfect strangers. It proved impossible to get me into hospital, or to find a nurse to look after me at the hotel. The doctor could prescribe me medicine, but it could not be obtained. The German Ambassador in Moscow at the time was von Dircksen and his wife, whom I knew quite well from Berlin and they showed a friendly interest in my plight, and as the German Ambassador to Persia, Count von der Schulenburg, happened to be on his way back to Berlin from Teheran via Moscow it was decided that he, with the assistance of his charming secretary a Russian girl should take me back with them to Berlin, pneumonia and all. And that was the end of my visit to the home of Bolshevism.

I have already suggested that the Soviet Government did little or nothing to defend its reputation against the torrent of falsehoods and slanders loosed against it, particularly in countries like France Switzerland and Hungary and that in some respects it even derived advantage from the actions of its enemies. I had the impression that the Russians were rather proud of their 'bad reputation The insulting word "Bolshevist" for many the epitome of brutality criminality and lawlessness, was for them a high compliment. They were proud of their "Dictatorship of the Proletariat" though Dictatorship of the People would have been a better term, and 'Dictatorship for the People" a still better one. There is no doubt that in a social upheaval of the magnitude of the Russian Revolution many severe and unorthodox methods are inevitable. Almost

any means seems justified to a revolutionary government if it promises to achieve the great end. It must be left to the Soviet Government to decide when the regime is sufficiently con solidated to render such exceptional measures unnecessary

In any case, I arrived home firmly convinced that Bolshevism had lost its revolutionary terrors, and that the period of evolution into which it had advanced need hold no fear for the rest of the world. On the contrary I was convinced then, and everything which has happened in the tremendous years which have passed since then has confirmed my conviction that the world may expect good rather than evil from that quarter

PART TWO

THE THEATRE, ART, MUSIC AND ENGLAND

CHAPTER I

SIXTY YEARS IN THE STALLS

THERE IS CERTAINLY nothing hereditary in my deep love for the stage. Search as I will all I can find is a paternal great uncle who was an actor But there it is the stage attracts me more than any other branch of the arts.

The dramatist conceives a world the producer gives it background the actor brings it to life. The process has always thrilled me. The drama is generally regarded as the highest form of literary art. A real work of art can only gain from new angles of approach, and thus a dramatic work of art often gains by its production and acting something new is added by the new eye, the new approach. A classical piece need not remain immersed in the shadows of the past in which it was created. It need lose none of its greatness when a new eye regards it and a new hand forms it. *It is no sacrilege to remove* the dross of time from a masterpiece and present it in a modern light. Clearly though, such attempts must always move dangerously between a proper deference and an impious despoliation. The man who undertakes the task must be a near genius if he is not to falsify the work of art and yet comply with the demands of the modern stage. It is around problems such as this that the modern development of the theatre has taken place.

In my sixty years of the theatre (more than that in reality but sixty is a nice, round sum) it was the resuscitation of classical pieces which remains in my mind as the most impressive experience. As far as modern drama is concerned I think we can already see fairly clearly what is likely to live of my generation Ibsen of course, some of Gerhart Hauptmann, Strindberg, *Schnitzler Tolstoy Tchechov Shaw Wilde, Eugene O'Neill* Pirandello, and a great deal of work by almost anonymous French dramatists, and with them the dramas of Victor Hugo, some of them in operatic form. Amongst the lesser-known Germans there is Wedekind's "Fruehlings Erwachen" and Carl von Sternheim's comic satires.

The Duke of Meiningen the founder and patron of a group

of actors, was a pioneer of modern stage ideas. He was perhaps the first to recognize that a dramatic work of art should not be presented as though it had been written around one "star" rôle, but as though it were one carefully integrated whole. He was certainly one of the first to break with the old "star" system. He dismissed one of the most popular actors of the day from his troupe and when asked why he dispensed with the services of such a conspicuously prominent artist, he replied that he had got rid of him just because he was conspicuously prominent. The "Meininger" as his troupe was called, established the modern school of stage presentation, and Otto Brahm in Berlin, Stanislavsky in Moscow, Antoine, who introduced the new realistic era in Paris, and Reinhardt developed the principles they first laid down in embryo. The stage of our day has reached a high level of development, but we are still in a period of experimentation, the "final forms" are being sought eagerly; they will not be the final forms when they are found.

The abandonment of the old forms was not a rapid process and from my youth I can still remember the theatre in which the pathos of the "star" before the footlights was the prime, and almost the only attraction. The footlights are about all I find to regret in the old theatre. A little before the curtain rose and when the "House" was already in a pleasantly expectant mood, the "Footlights Man" would appear with his flame on the end of a pole and perform his task with dignity, thoroughly conscious of his great importance—without him there could be no performance at all. And night after night without fail when the painting of the stage curtain glowed softly in the light of the row of candles he received his meed of applause from the delighted audience and acknowledged it with no less—often more—dignity than the star himself.

In my opinion the footlights proper represent the one really effective method of stage lighting and I believe the technique of lighting will return to it one day, and I am not forgetful or unappreciative of the work of Gustav Knina, a brilliant pioneer here. Footlights throw the light from below upwards and that is kindest of all to the actors: the women look more beautiful and the men more majestic. Lighting from above is not so kind. And the gradual toning down of the lighting in accordance

with the depth of the stage enhances the general artistic effect. Excessive lighting on the stage is like excessive varnish on a work of art

My first memories of great actors go back to my very early years, to a time when I was perhaps four or five A brother in law of my father owned a German theatre in Budapest. It was a sort of experimental stage for coming talent, and on the whole its level was not high. However it was also used once a year for the purposes of bringing Germanic culture to the rebellious Magyars and the propaganda experts of the Habsburg Monarchy though they were not called that in those days, sent the whole ensemble of the famous Vienna Burg Theatre to Buda pest for a guest season. This was usually during the summer holidays and after the performance the whole caste invariably assembled for supper in some garden restaurant or other to the strains of the inevitable gypsy band My parents were often present at these care-free gatherings of the off-stage actors, and as for some reason they found it impossible to leave me I was taken along with them. I was never more spoiled in my life than on such occasions. I was a sweet little boy" it seems, "with lovely black curls and big cute eyes" Alas, time flies and the sweet little boy is now an old gentleman, but then the great actresses of the day—Gallmeyer Wolter Medelsky and Hohenfels—vied with each other to take him on their knees and stuff him with sweetmeats. The days were dull to me and I lived for those evenings The "lovely black curls" have gone, but in one respect I have never changed I exist by day and go about my affairs, but I live at night. My best work has been done and my most productive ideas have come to me at night. It has never mattered to me at what time of the day I took my eight hours sleep and this unorthodox manner of living has never seemed to affect my health unfavourably

I can remember seeing the great Sonnenthal act with his impressive heroic pathos. I can see him now as Carl Moor with his long black brigand s beard, and Mitterwurzer in the fiery red mask beside him. The dramatic theatre in those days was very much like the opera to-day The audience waited impatiently for the 'big scene as the operatic audience to-day for the big aria. The star would very obviously

his position before the prompter's little pigeon-hole, adopt the appropriate heroic pose, throw out his chest and peel off his thunderous declamation for all the world as though what went before and whatever might come after had nothing to do with the matter at all.

I saw the two Salvinis and Ernesto Rossi of the same barn-storming school But then came Zacconi and, above all, Eleanora Duse. They were contemporaries, but under the influence of Ibsen they abandoned declamatory pathos and adopted the newer simpler more vital and more realistic methods. The "star of Rossi's day was like the one good jewel in a tiara of paste. In fact the "star of those days often believed that he could shine more if he were surrounded by mediocrities There is a mysterious mutual relation between brilliance and mediocrity A brilliant star does throw reflected light on the surroundings as the picture of an old master in a gallery lends an added lustre to less valuable works around it, and the value of a supporting cast will be enhanced by the presence of a great actor in its midst. The famous gentleman art dealer" the Hungarian Nemes, once confided to me that he could best sell his second- and third-class stuff when he grouped them around some masterpiece. It seemed to lend them an appearance of greater value than their intrinsic worth.

As far as Sonnenthal Salvini and Rossi were concerned I witnessed some wonderful interpretations of Shakespearean characters, but never the play as a whole. That was certainly a drawback, but as against that I do not think I have ever again seen Hamlet Othello and Lear played so powerfully When I was a boy I had the cherished privilege of running errands for Rossi. The man was all actor, not merely on the stage. His every gesture was studied from his benevolent condescending greeting to the way he put on his boots. He was invariably in his dressing room to start his make-up two hours before the performance began Never not even with famous film actors, have I seen such extraordinary care in make up as Rossi's. Marlene Dietrich took about an hour Laughton's Rembrandt was ready in half an hour Rossi took two hours. Every hair was in its place when he was the mad Lear every straw in his hair and beard was carefully positioned, when he

was Othello the brown of his palms was carefully measured against the darker brown of the back of his hands. Between the acts Rossi stayed in his rôle, and even when the play was over it took him some time to get back to normal again. Only after the fourth or fifth call would he quickly remove his make up and then present himself to the audience with a spring for ward and a bow to show how young he was (when he was no longer so very young) And the public would roar with delight, naively surprised at the sudden change. That was acting when the acting was over

I first experienced the beginnings of the new unpathetic, realistic drama in 1898 at the Alexander Platz in Berlin at Ernst von Wolzogen's little theatre *Ueberbrettl*. For the first time I saw actors move about naturally on the stage and speak their lines without pathos. They were mostly sketches of a very mild social-revolutionary character It is comic to think back to-day and remember what in those days was supposed to be revolutionary the mere mention of strikes or the working-class movement the mere mention of the elementary rights of man seemed a threat to the existing order Any pungent criticism of existing institutions was a sacrilege The poems of Otto Erich Hartleben were like a clarion call It is interesting to note that the theatre was the first form of art to make a break with convention.

The chief publisher of the new German literature was the Hungarian Jew named Samuel Fischer the founder of the world-famous Fischer Verlag His right hand man and chief reader was another Jew Moritz Heimann, the brother-in law of Gerhart Hauptmann and, as a non-Aryan no desirable rela tive. The modern German theatres were almost all directed by Jews. Ludwig Barnay (Braun) another Hungarian Jew was the director of the State Theatre for years. The Jew Abrahamson (Brahm) was director of the Lessing Theatre. The Deutsche Theater was under the Jew L Arronge (Aron) and later Max Reinhardt (Goldmann) a Jew from Pressburg in Hungary Two of his closest collaborators were the Jews Kahane and Hollaender The Hungarian Jew Ferencsy was director of the Berliner Theater his successors were also Jews Meinhardt and Bernauer The Theater in der Koeniggraetzerstrasse was

founded and directed by another Hungarian Jew Eugen Robert (Kovács) The Residenztheater was in the hands of Geheimrat Lautenburg a Jew from Budapest. The Wintergarten was founded by another Jew from Budapest, Baron. The Jew Freund was at the Metropoltheater Victor Barnowsky was director of the Kleines Theater He was the only born and bred Berliner of them all, but he was also a Jew The list is a long one, but it is by no means complete there is Jessner Schoenfeld, Haller Friedmann Rotter and many other Jews From Brahm to Haller, they varied in level but all in all it was to them that Germany owed the supremely high level of her theatre world—until the Nazis came to power

These are the men who founded the tradition which became world wide. I knew all the men I have mentioned, and quite a number of them were my friends, including Brahm, Reinhardt, Eugen Robert, Fischer Heimann and his successor Oscar Loerke. I was thus in a position to watch the development of the German theatre at close hand so to speak from behind the scenes. And when I speak of actors and their art I base my judgments not on my own observation alone but on much that I have learned in close friendship with such leaders of their profession of Joseph Kainz, Alexander Moissi, Albert Bassermann Rudolf Rittner Werner Krauss, Paul Wegener Max Pallenberg Gertrud Eysoldt, Lucie Hoeflich Fritzi Massary Camilla Eibenschuetz, Lucie Mannheim Leopoldine Constantin and others. What deeply satisfying memories I owe to these troupers!—from the stalls, behind the scenes, at the bar or in the restaurant.

Generally speaking actors fall into the following well-known psychological categories the dramatic actors are hypomaniac cheerful, the comic actors depressive choleric. As far as their acting is concerned they are either intellectual or intuitive. Albert Bassermann was the greatest amongst the intellectuals Moissi amongst the intuitives. When Bassermann played Hjalmar Ekdal in Ibsen's "Wild Geese you learnt in the Third Act why he had seemed to be so uncomfortable in his dress coat in the First. Hjalmar Ekdal had borrowed a dress suit for the occasion, and it was too small for him. Bassermann acted with subtle nuances. Gertrud Eysoldt, his female counterpart,

could hold a character under constant intellectual control thanks to her own high intellectual qualities. On the other hand, Moissi, Else Lehmann and Lucie Hoeflich, to mention only two or three of the best, were purely intuitive in their acting The incompetence and woodenness of these actors and actresses at a rehearsal was enough to make a director tear his hair out. They played through their parts like puppets. But when the first night came and their audience was before them they were inspired. "Theatrical blood is the usual explanation of such phenomena. It will do for want of anything better Interrogate such actors and actresses about their performance, try to find out from them the secret of their success, and they are tongue tied they just don t know themselves. Inspiration in the presence of an audience gives them their capacity

Under what general denominator—if any—can one bring actors? In 1910 the first psycho-analytical congress met in Weimar There were about a dozen of us present. We were the 'World Congress It was here that I met Freud for the first time. Whilst on the way with him to visit Goethe s famous Garden Pavilion I mentioned that very many of my actor friends and patients complained of agoraphobia, and that I should like to have his opinion on the point. Freud turned to me a little impatiently "You re putting the cart before the horse. People who suffer from agoraphobia become actors, members of parliament, and generally people who display themselves before audiences. Agoraphobia is the conversion of their exhibitionist tendencies the prostituted soul is afraid of the street. First of all the inherited tendencies are there and as a result of them the man chooses his profession not the other way about I have had more than one experience which went to suggest that Freud was right.

However the question of the choice of profession by inherited tendencies does not affect the division of actors into intellectual and intuitive players. Unfortunately very often the critics are the only people who know about an actor s category and he is ignorant of it himself. Sometimes an actor feels it and tries to free himself of his own limits, tries his hand at the opposite The real intellectual will always find a balance if he gets rid

of his involved reasonings, but heaven help the other sort if they suddenly try to be intellectual.

Success is difficult to digest not many people can do it, but in my experience actors are better at it than politicians. When an actor meets with success he sometimes feels that he ought to provide himself with a visibly proportionate wealth of intellect, and he begins to think. It is a dangerous thing to do and it suits few people. It must have been in some such mood that the great Moissi began to turn over the deep mysteries of life in his head. Unfortunately in his thirst for understanding he smuggled himself into a delivery ward in the guise of a medical student to observe the beginnings of life at first hand. He was indiscreet enough to do it in Salzburg the centre of Austrian clericalism, and the explosion of wrath that followed was tremendous. It was certainly no evil or frivolous motive which guided him, but it finished him. He was never again allowed to take part in the Salzburg Festspiele, and not long after the unfortunate incident he died.

Moissi was altogether a remarkable character He was not a man of any very great intellect but he loved to pretend he was. His voice was of an extraordinary quality It had a musical beauty which affected some people like an aphrodisiacum neat. Women flung themselves at him—and he made plentiful use of his opportunities—until he met, fell in love with and married Johanna Terwin He worshipped her and from then on he was a model husband. She was a very favourable influence on his career and she managed the boastful and overweening Moissi with great tact and discretion. It was Reinhardt who discovered him and remained adamant when the critics almost overwhelmingly rejected the over-sweetly romantic Italian with the foreign accent. But for Reinhardt's determination the German stage would have lost Moissi though Alfred Kerr alone amongst the critics supported him. Instead of getting rid of Moissi as many critics noisily demanded, Reinhardt extended his contract.

Strakosch was the famous elocutionist of the day and he took Moissi's accent in hand very successfully Reinhardt was deter mined to prove that his judgment was right and not that of the mass of the critics. He gave himself endless trouble with Moissi

and provided him with ample opportunities of displaying his histrionic ability Step by step the hostile critics were silenced until in Beer Hofmann s tragedy "The Count of Charolais Moissi achieved a success which placed him indisputably in the front rank of Germany's dramatic actors.

Reinhardt's contract with Moissi bound him for ten years at the Deutsche Theater for a salary of 7 000 marks, but during his free time he received as much as 100,000 marks from Louise Wolf, the concert dictator of Germany in those days. Moissi was one of those people who could not stomach success. It went to his head. At the height of his fame he became moody even hysterical. On one occasion he burst into fits of laughter on the stage and the curtain had to be rung down and the performance abandoned On another occasion when playing Dubedat in Shaw's "The Doctor's Dilemma" he declared indignantly on the stage that he was as sound as a bell and he wasn t going to die of consumption to please any audience. It was impossible to pacify him, and once again the curtain had to be rung down The fact was that Moissi had suffered from tuberculosis he had been treated in his sunny home town of Trieste for years, and he lived in constant fear of the disease. In the end it returned and took his life At his funeral his great colleague Albert Bassermann paid him the highest possible tribute. Bassermann held the Iffland Ring which was presented yearly to the best dramatic performer of the year Bassermann took it from his own finger and laid it in Moissi s coffin.

CHAPTER II

THE STAGE ITS CRITICS AND ITS FINANCES

THE LONG HEYDAY of the theatre in Berlin began in the nineties. A number of dramatic authors led by Otto Brahm founded the "Freie Buehne in 1889 along the lines of Antoine s "Theatre Libre in Paris Both these theatres produced new and unorthodox plays independent of the tastes of the general public, performing them before a limited membership Subsequently

the genius of Max Reinhardt at once and did not a little to influence him He refused to compromise when matters of principle were involved. He had been a very close and intimate friend of Gerhart Hauptmann, but when Hauptmann went over to the Nazis the mortal enemies of any form of civilized culture, Kerr broke with him at once.

It was Otto Brahm who first produced the works of Ibsen and Hauptmann. He did more than produce them, he fought for them and established them in their right. His task would have been much more difficult but for a few critics like Alfred Kerr From 1895 onwards Brahm s productions of Ibsen were so impressive and significant that they opened up a new epoch in the German theatre. The new quality of depth and sincerity had been unknown on the German stage since the days of Lessing himself. His production of Ibsen s Wild Geese in 1901 was more than a theatrical performance It was a solemnity of deep human emotions Brahm had a magnificent band of actors at his disposal Else Lehmann, Emanuel Reicher Rudolf Rittner Albert Bassermann Oscar Sauer Hans Marr Gertrud Eysoldt, Irene Triesch and in the beginning Joseph Kainz and Sorma. And Max Reinhardt must not be forgotten—Max who in the twenties had already made himself a reputation in the parts of old men I knew all these actors and actresses, some of them intimately and their friendship has been an unforgettable experience for me

They were more than actors earning their living They were devoted to their art, and many of them worked on until the last moment and died practically in harness. Otto Brahm himself was one of them. Very few people knew just how ill he was. A year before his death he probably knew that his stomach trouble was incurable but he worked on without sparing himself and on many occasions I had to give him an injection to make it possible for him to carry a rehearsal through to the end. Oscar Sauer suffered from ataxia which made him uncertain on his feet and liable to stagger He made a virtue of necessity and to those of us who knew the truth his great success in Ibsen s "Ghosts" when he played the rôle of Pastor Mander, and in "The Doll s House when he played the rôle of Doctor Rank and left the stage with uncertain gait, was a

tragedy The audience thought they were witnessing a master piece of the actor's art. Yes, they were, but not quite in the way they thought and none of them knew that behind the scenes we had to do our utmost to get him on his feet again

Rudolf Rittner was another actor who won a solid reputation. *I remember walking home with him after his greatest* triumph in Hauptmann's 'Florian Geyer' It was then that he first decided to give up the stage and return to the land. He was the son of a small landed proprietor little more than a well to-do peasant, in Upper Silesia. Despite his big success it was impossible to persuade him not to carry out his intention and after the last performance of 'Florian Geyer' he returned to the farm on which he was born "to plant potatoes and philosophize He had a massive head with a fine broad fore head and magnificent eyes, and a neck like a bull His deep voice had a vibration which set the nerves of the spine tingling *when he delivered dramatic lines* The *impressive scene when* Florian Geyer stabs the symbol of German discord suiting the word to the action three times brought the house down when Rittner uttered the line "Der deutschen Zwietracht mitten ins Herz!" The applause developed into ovations which lasted several minutes. But Rittner left it all turned his back on the lights and went home to plant his potatoes.

One of Otto Brahm's young actors became a director His name was Max Reinhardt. Brahm's style was a deep and sincere realism. With Max Reinhardt a new influence made itself felt a more romantic, a more colourful, a more decorative one. It is quite possible that Max Reinhardt's art would have been confined to Germany but for the fact that a famous colleague who happened to be on a visit to Berlin was deeply impressed and exported" one of Reinhardt's productions to London. That colleague was the famous producer C. B Cochran whose gigantic production of Vollmoeller's "Miracle in the London *Olympia with the music of Humperdinck and Maria Carmi* in the leading rôle was a milestone in theatrical history

In 1906, after Reinhardt had begun his career as a producer in the hired Deutsche Theater Stanislavski and his troupe came to Berlin. Brahm had begun his Ibsen work eleven years before Stanislavski, who freely admitted that he had learnt much from

both Brahm and Antoine With the assistance of Ellen Terry's son Gordon Craig and his new and revolutionary décor Stanislavski developed his own original and masterly theatre, but Brahm's with his own daring productions and his tremendous and sincere realism owed nothing to Stanislavski and he predated him by many years

The economic and technical side of Germany's theatre development interested me particularly and I think this angle is likely to prove instructive to lovers of the theatre in England. The English theatre seems to be going in just the opposite direction In Germany Otto Brahm had perhaps the last real ensemble theatre Afterwards there was hardly one left apart from the State theatres Actors were engaged for individual rôles. The whole theatre world in Germany was a sort of family and it was from this community that the required actors were engaged *ad hoc* for a particular play Only a few of the more prominent players were engaged for longer periods with higher salaries

This state of affairs arose inevitably out of the development of the repertory theatre to the ordinary run theatre the one changed its programme every few nights, sometimes even every night, whilst the other played the same piece for just as long as the public would stand it. With the repertory theatre a number of plays had to be cut and dried in acting and presentation so that they could be put on and performed at a moment's notice. For this the theatre naturally required a company of players used to each other and the plays, so that perhaps one rehearsal was sufficient for any of the plays in the repertory With the theatre which went in for long runs (or hoped the run would be long) the new piece was always specially studied and rehearsed, and prepared from the beginning with special décor costumes and so on and, of course, the most suitable actors. With the arrival of the permanent National Theatre with a constantly changing programme of plays and a permanent company of actors the English theatre world will be faced with similar problems

There is much to be said in favour of either type of theatre, and Germany and in particular Berlin tried out both and every possible variation of either One particular strength of

the German theatre world was its readiness to experiment. Germany's theatre-goers had been brought up by the critics to expect something more than just the usual, no matter how admirable the form, and they were therefore enthusiastically willing to support any attempt to give them something new. This willingness to experiment on the part of producers, the encouragement on the part of the critics and the readiness of audiences to give the experiment a chance are all necessary conditions if a theatre is not to stagnate.

And the money! Or rather the obtaining of it. The speculations and the financial tricks which were resorted to in order to obtain capital were many, varied and amusing. So much depended on good luck. In that respect the theatre is one of the legally permitted lotteries. I don't know anyone, no matter what his experience, who could say with certainty that a piece was going to be either a howling success or a dismal flop. There is, of course, the tried and trusted method of trying it on the dog first. See what the provincials think about it. But provincials don't always react to a play as the more sophisticated public of a capital city does, and so the method is not entirely reliable. I can't remember an opera of Richard Strauss which was first performed in Berlin or Vienna. Dresden was always the place chosen for the *première*—and the Saxons didn't mind in the least; on the contrary they were rather proud of it.

For the real theatre fans in Germany attendance at the last full-dress rehearsal before the *première* was almost more important than attending the *première* itself. It was even possible to make suggestions and have them listened to. But if one thing is more true than another about the theatre it is that too many cooks spoil the broth. I have witnessed Brecht and Weill's modern version of "The Beggar's Opera"—a piece that has justified itself as a dead certain success again and again—fall utterly flat even with brilliant stars like Yvette Guilbert. And all because the production had been entrusted to five well-known producers to make quite certain that it would be something quite exceptional, instead of entrusting it to one. A theatrical production, like any other work of art, must be all of one piece.

I have often seen the light hearted and only too willingly credulous theatre folk quite certain of success and a long run. Counting chickens before they're hatched is a favourite pastime, and worse than that, they take advances on their salaries to drink to the certain success And then on the night of the *première* the cashier is unemployed and there is no money for their salaries. The financial difficulties encountered in and apparently inseparable from the theatre world have given rise to a lot of disagreeable phenomena in Berlin. Some moneyed man on the make would buy up a certain number of the seats for a certain number of nights at a fraction of the box-office price and sell them for perhaps half the normal price. Such cheap tickets would of course, go, but very often the normal tickets would be left largely unsold

Generally speaking prominent directors could evade the clutches of sharks of this type to whom the poorer man often had to turn in desperation. The big and reputable men usually had patrons behind them who were prepared to let their hobby cost them a little I have known quite a lot of such people. I won t mention their names here for if I did they'd get no peace. They were a philosophical crowd if they lost their money well, at least, they had enjoyed themselves—and it s so easy to lose money without any compensating enjoyment. And sometimes the attraction was a handsome actor or a pretty actress. Yes, bricks were made with straw in Berlin too though in some respects the theatre was very much better off in Germany than in most other countries because, as I have already said, the Weimar Republic, so weak and contemptible politically was a tower of strength to the arts including the theatre, and under its most beneficent sway they experienced something very like a Periclean era.

CHAPTER III

REINHARDT S THEATRE

MAX REINHARDT (Goldmann) a Jew was born near Vienna of an Austrian mother and a Hungarian father He and his works have so often been described that there is little I can

add to this, so to speak, official picture, but perhaps my knowledge of Max Reinhardt as a friend may help to throw new light on an interesting personality

His parents were poor people of no, what is called, social standing His father was a tailor in a small way of business and he had no easy task to feed and bring up his numerous family Max was the oldest child Edmund was the second born, a daughter was third, and Leo fourth, and then there were four others. Mother Goldmann was not easy to get on with and although I saw her practically every day for many months the occasions when she was prepared to talk about Max's childhood were rare. As a child he seems to have been attracted to the theatre and she can remember having discovered him play acting and declaiming before a mirror After living for some time in Baden the family moved to Vienna, and it was here that Max really began his theatrical career The fascination of the stage did no good to his formal education, but as far as real education was concerned he made up for it later with tremendous ambition and industry Whilst still a young man Max went to Berlin, where he succeeded in securing a minor engagement with Otto Brahm.

Max Reinhardt's success was rooted in his own capacity but without the favourable surroundings it would never have had a chance to develop In that sense he was "lucky' Just about the time when the old century was thinking of giving way to the new Central Europe became theatre-minded as never before. Talented playwrights, and many of them playwrights of genius, sprang up everywhere and helped the theatre to a new birth. In England there was Oscar Wilde and Shaw in Holland Heyermans, in Belgium Maeterlinck, and, above all, in Norway there was Ibsen and, though not quite in Ibsen's class, Bjoernson In Germany there was Hauptmann and in Austria Schnitzler in France Henri Becque, Brieux, Bernstein and Rostand in Spain Echegaray in Hungary Franz Molnar and in Russia Tchechov and Gorki. An extraordinary galaxy of talent and genius, and they were all unorthodox and all, one might say traditionless—at least in the hidebound sense. The original source of this brilliant phenomenon was the half-hidden Marxist social revolution The problems with which the new play

wrights largely dealt were more social than they had ever been before, and they derived from the inner crisis of society which first began to make itself felt around the year 1900 in the middle not of an economic crisis but of a tremendous period of capitalist prosperity The industrialization of Europe was bearing rich fruit, and prosperity demanded its pleasures. Theatres, cabarets dancing halls, variety shows and music halls shot up everywhere, and the amusement industry includ ing the theatre experienced an unexampled boom.

This was the favourable opportunity which Max Reinhardt seized upon With a group of his colleagues from the Lessing Theater he organized a travelling company to play in the theatrical close season. They went to Vienna, Prague and Budapest. Amongst the company was a young actress of talent named Else Heims not only had she talent but she also had beauty God may have created a more beautiful neck, shoulders and back than Else Heims possessed but I doubt if he ever did. Max Reinhardt fell in love with Else and married her and she bore him two sons

The tour was not only an artistic success—with such talents at its disposal it could hardly have been otherwise—but also a financial one and it was repeated for a number of years. I believe that throughout the whole period there was only one performance which was a failure, and that was not merely a failure but a fiasco though even that was a blessing in disguise. The company of course, was German so the hooligan followers, chiefly students, of a certain violent Chauvinist named Ludwig Rátaszky demonstrated their patriotism by attending the per formance and liberally sprinkling the theatre with stink bombs. The stench of *asafoetida* made the auditorium untenable and the performance had to be called off but the favourable pub-licity the company received in consequence made the rest of the guest performances in Budapest a tremendous success, and for years after that their coming was looked forward to eagerly and they played before crowded houses.

There was another incident of some considerable artistic importance in connection with the tour In Prague the com pany made the acquaintance of an unknown young artist who did a placard advertising their performance of Hauptmann's

"Die Weber" It was fundamentally a simple design in the foreground were heads of obviously shouting singing triumphant men and women, and above them waved a flag It was nothing more, but it was done with such power and intensity that its effect was striking stirring and revolutionary Done in strong black and white contrast with just a little red on the lips, it created a sensation and affected the future development of the poster art as few things had done before or have done since. The young man s name was Emil Orlik, and after that he was no longer unknown. He designed about sixty such placards, though none had quite the success of the first, and, indeed, could not have had. Perhaps the original designs of those posters are still proudly stored in the tailor s workshop of Orlik s brother Hugo in Prague. They were there the last time I heard of them.

But neither this travelling theatrical company nor his limited opportunities at Brahm s theatre satisfied Max Reinhardt for long, and with a highly talented colleague, Valentin, he founded a brilliant little cabaret where satirical sketches were performed, usually with some amusingly barbed point directed against existing institutions and in particular the pocket principalities of Germany It was a very small theatre and the stage was pocket handkerchief size, but it triumphed over all its limitations and became a pronounced artistic success. It tempted Reinhardt to extend. But means were still short and the greatest possible effect had to be obtained with the smallest possible expenditure. It was part of Reinhardt s genius to find the best possible collaborators. One of the most important of these was a quiet little man with keen eyes who always listened carefully to instructions, and then proceeded to carry them out almost wordlessly He worked alone, always armed with a soldering iron, and with the restricted means at his disposal he produced what few others could have done in his place. The silent genius, for he was certainly a genius, was Gustav Knina, later to become famous.

Without Knina the little company felt lost. If anything went wrong, Knina was there to put it right. If the lighting failed Knina restored it. If the scene had to be altered or re-arranged Knina did it. He knew exactly what Reinhardt wanted and he

knew how to obtain it. Without exaggeration I think it can be said that there was no problem of stage technique during the past forty years whose solution was not due to Knina or to his influence. I don t know whether he actually introduced the horizon i.e the concave wall of plaster closing the stage, but he certainly established the best way of placing the reflectors to secure the uniform lighting of it The revolving stage in its present-day state of perfection derives from Knina s work. As an arranger of the décor he was unequalled, and he had a never failing taste where interior decoration was concerned. It was a pleasure to wander through the second-hand and antiquarian shops and markets with him. Amidst a pile of useless junk his eagle eye would spot the one useful thing and bring it to light unerringly Many a pearl of art and craftsmanship owed its resurrection to Knina

When Reinhardt took over what had been the Circus Schumann and turned it into the Theatre of the Five Thousand it was the well known German architect Poelzig whose name appeared on the bill, but I know the enormous part Knina played in the work. For instance, when the Grosses Schauspielhaus was finished it was discovered to the horror of all concerned that its acoustics were so bad as to render it almost impossible. And once again Knina came to the rescue with a brilliant idea. The whole interior ceiling was provided with stalactites and the rest of the decoration toned in accordingly with the result that the human voice was again made audible in the great auditorium. Until his death Knina remained one of Reinhardt s closest and most loyal collaborators.

I have already said that it was part of Reinhardt s genius to group the best possible array of talents around himself each devoted to the aim of the whole and willing and anxious to do everything possible to carry out Reinhardt s ideas and make the thing a success. It is significant, too that Max Reinhardt was idolized by his personnel There was nothing they would not do and no lengths to which they would not go to serve him and his ideas. A sort of artistic family grew up around him Everybody knew everybody else by his Christian name, and Reinhardt was just Max to them all. For the old guard he remained also

Max to the end though later on newcomers gave him his formal title of "Professor

When Reinhardt's services to the theatre stood beyond all dispute some official recognition was suggested the bestowal of a titular professorship was the usual way In Prussia the matter lay in the hands of the Ministry of Culture. The Minister was a dyed-in-the-wool junker of the old school with the comic name of Trott zu Solz, which was generally turned into the far from complimentary Salztrottel' "Trottel" meaning block head. It was unheard of that a theatrical producer without formal academic qualifications should be given even a titular professorship so Salztrottel who thoroughly deserved his nick name, refused to put Reinhardt's name before the Kaiser in the Honours List. Quite apart from everything else, a fellow who produced modern and unorthodox plays was politically unreliable. And thus it looked as though the man who had done more than any other to raise the artistic level of Berlin's theatre and had brought hundreds of thousands of interested visitors to Germany would have to go without official recog nition. However one of the duodecimo princelings charged into the breach and took it on himself to make Max a real professor in his own little State, thus killing two birds with one stone raising his own prestige as a patron of the arts and sticking a pin into the rump of the "Sow Prussians'

That was just before the first world war Max Reinhardt's fame was already spreading over Europe and the theatrical world of Berlin was at his feet. The minor character actor of plebeian social origin was another man of real personality who was not spoiled by dizzy success. He did not seek the honours that showered on him, but he accepted them willingly and with a dignity free of all arrogance. But I know where he felt happiest and most at home, and that was with a group of good friends in some small restaurant where the Vienna cooking could be relied on. And there he would sit and let himself be amused. I say let himself be amused, because he was no great talker though when he did speak in his even and rather slow voice, what he had to say was worth listening to. Max never expressed an opinion they said he uttered a revelation.

One thing you could never discuss with him, however and

that was business business was Edmund's job Edmund was an exceptionally good business man. He had been in the leather trade until Max's success in the theatrical world drew him into it to look after the business side and on that side he was almost as great a strength as Max was in the artistic sphere. In appearance he was like a rather sick edition of Max with the same keen eyes and mobile features. He was frail in build quiet like his brother and always very well dressed. He seemed to have no nerves and if everyone else was excited Edmund was always as cool as ice He too spoke slowly and quietly He had a bad heart but it was not the knowledge of this that kept him calm. It was a matter of temperament. He could have shared his brother's life and all his honours, for the two were extremely fond of each other but their private lives were utterly different. Edmund lived almost like a hermit and I don t think I ever saw him in the company of more than two or three people outside his business affairs. He had no ambitions for himself, and his life was led chiefly in his office, which, incidentally he had decorated with very good taste, making very good use of his old favourite—leather He was a modest and unassuming man and a good friend I remember on one occasion we shared a wagon lit compartment The train was due in at seven in the morning Edmund got up at six and made himself ready Then he pulled up the covering of his own bunk, laid out my clothes carefully for me to find ready—and began to clean my shoes A little matter but very typical of his friendliness and helpfulness

Edmund had no easy job The finances were complicated and money was short The cabaret "Schall und Rauch had been started with practically nothing and certainly no reserve funds. Its success made development essential, and it became the Kleines Theater After that came the Neues Theater on the Schiffbauerdam then the Deutsches Theater which was later supplemented by the Kammerspiele a transformed dance-hall for servant girls known as the Bemberg" The first financial angel was Beate Loewenfeld "Auntie" as she was called She was the widow of a wealthy director of the Deutsche Bank childless and wrapped up in the theatre Another most favourable circumstance was that she suffered from chronic

insomnia. Auntie Beate was a type which I am afraid is fast dying out, if it has not already died out. She was goodness and sympathetic understanding personified tremendously helpful, and almost naively grateful for every indication of thanks and friendship She was no comic figure by any means she not only loved the theatre but she knew a lot about it. She was one of the first to recognize Reinhardt's great talent and she stuck to him through thick and thin. It was thanks largely to her generous support that the modern Deutsches Theater was founded. Her criticism of the play and the actors was extra ordinarily penetrating though to look at her settled comfort ably in her seat with her pince-nez on her nose you would have thought her making up for the insomnia she suffered elsewhere. Max himself and all his circle had a deep and sincere regard for Auntie Beate. When her final illness brought her to bed I had to tell Max that there was no hope of recovery Like many geniuses he seemed to live in a world of his own where the ordinary hateful things of life were unable to touch him, and I think when he finally realized that dear old Auntie Beate would never again drink merrily with us after the theatre it was the first time that tragedy really touched him and he realized that life is not endless.

Edmund had to fight not only against usurious interest rates and such-like disagreeable economic phenomena, including rapidly increasing star salaries—he would not have found that too difficult—but he also had to clip his brother's spreading wings from time to time and to do it without hurting That was not so easy Max had no sense at all for economics, not even for the plain economics of the theatre which was his life. Everything had to be on the grand scale He was the artist, not the reckoner and he often produced on such a lavish scale that not even a hundred houses sold out in succession could make the venture show a profit. He relied on Edmund to perform financial miracles. The Deutsches Theater had 1 500 seats that was the limit. To open up other sources of revenue came the theatrical tour and here Edmund coined money from the com pany's artistic renown. The *Grosses Schauspielhaus in the* Schumannstrasse saved from disaster at the last minute by Knina, was purchased and transformed at a cost of six million

marks, and after that the splendid Schloss Leopoldskron near Salzburg with its open-air stage and its exotic zoological gardens

With his complete disregard of material matters Max Reinhardt was a sovereign master of the art of living I think this is the key to his character—and to his success I don t believe that Reinhardt himself realized that his primary motive was to live life to the full in the sphere in which his rich talents could develop to the best advantage and that for his own pleasure he succeeded in creating things of lasting value to the world around him. Perhaps he was convinced utterly that the things which pleased him must also please others. In any case, I am quite certain that in his work he consulted no other source than his own artistic demands and feelings

He was on the whole rather an indolent nature and he could laze with complete enjoyment But when he went to work he was possessed by the very devil of industry I hope that the originals of his producer scripts have been preserved They were no more than flimsy Reklamhefte with his marginal ments closely written altogether astonishing documents. or almost every printed passage there is some associative idea jotted down. The ideas of the author are understood experienced thought out re-created and given flesh and blood in theatrical reality

All this preparatory work was done at night and in the early hours of the morning Max Reinhardt was another one who preferred the night to the day and I don t think that any of his creative work was done in the daylight hours Before mid day he was never to be seen and most of his rehearsals were fixed for the night hours after the evening performance It was only in the night that Max really lived

A producer is more favoured than most artists in that he can more clearly see the growth and progress of the work he is engaged on The preparatory work, the preparation of the script, is done in private but the concrete work to give the ideas a material form is done almost publicly in the presence of many people the personnel and very often visitors. This form of creative art is therefore an open gold mine for the keen observer—I almost said for the scientific observer In any case,

I have often thought that this is the specially fascinating attraction which lies behind my devotion to the theatre for so many years, and will keep me a theatre enthusiast to the end of my days

CHAPTER IV

MORE REINHARDT

IT IS ODD that Reinhardt owed his first really brilliant success not to his own great capacities as a producer but to sheer chance the death of a colleague. This was Valentin, a man of real talent who had prepared Gorki s "Doss House for presentation down to the last detail. He had felt ill during the rehearsals, but the hurry and flurry of the task had kept him going When everything was practically ready he collapsed. Neglected appendicitis had developed into peritonitis. The symptoms had been clear enough and he had been warned, but he was determined to finish the job He did, but it cost him his life. He died just before the *première* Reinhardt took over and let the piece go forward exactly as Valentin had prepared it. The success was tremendous and the run lasted several hundred nights.

Reinhardt himself played the Baron. I believe he appeared on the stage only twice after that, but be continued to act all his life, because at every rehearsal he would demonstrate part after part to show his actors just what he wanted. This was no dictatorial imposition of his will. He would always listen carefully to their views first, and what finally was agreed on was a combination of their ideas and his. It was one of Reinhardt s strong points that he respected an actor s individuality and was, indeed, only too anxious to underline it. The actor did not abandon his own personality but won new strength from Reinhardt s direction for his own performance. It was beneficial action and reaction between actor and producer Reinhardt s authority was, of course, undisputed, but he was not in the least authoritarian. His authority came from the fact that he was supremely competent and that as a first rate actor *himself he knew all there was to be known* about the art and

himself commanded the physical expression of the stage emotions. He not only knew exactly what he wanted, but could do it himself. When finally his verdict was complete there was no contradiction simply because he was right and his actors knew it.

In private life he was a good-natured man. He loved life and he loved living. He liked the best food, he made love to the most beautiful women, he surrounded himself with the most amusing companions, and in Schloss Leopoldskron he possessed the perfect example of a small baroque palace. There is such a thing as genius in the enjoyment of the good things of life, and Max possessed it. I believe that he produced primarily for his own enjoyment and then invited the public to come and enjoy what he had first enjoyed himself. He was far from *blasé* in the theatre. A stage tragedy could move him deeply. The dramatic here could bring him to tears. And there was no better audience for the comic actor than Max. I have never seen anyone enjoy himself more or laugh more heartily. He was a good friend, and in need he remained a good friend. Something of a sentimentalist, he avoided depressing things and depressing society whenever he could. But easy as he was to get on with in private life, easy and ready to give way, he was firm and determined where his art was concerned: not only firm and determined, but even ruthless. In the interests of the work in hand he was prepared to sacrifice the most devoted collaborator if he found someone else more suited to the part, and he would make the change with no more emotion than if he were changing his tie. If he had determined to dismiss someone he would spare no cost, just as he would spare no cost to obtain someone he wanted.

He was a great and daring experimenter, and he would consider any idea which seemed at all promising, and, of course, he was bombarded with ideas from all sides. His talented dramatic readers Arthur Kahane and Felix Hollaender read piles and piles of MSS. of all kinds, and I doubt if much of any value escaped them. Whether the piece chosen was a new one or a revival, the presentation had to be new and in some way original. A prominent actor had to have a part written specially for him; an old play had to be revived to demonstrate

some new production idea the classics had to be rejuvenated with modern stagecraft. In every new presentation there had to be something original and attractive. Of course, with so much done and doing mistakes were inevitable here and there, but if anyone knew how to turn disadvantage to advantage and make a virtue of necessity it was Max Reinhardt.

Camilla Eibenschuetz was little more than a girl when she came to the stage, inexperienced and suffering from stage fright. Reinhardt saw that she had talent and he gave her a prominent rôle at once in Raimund's Alpenkoenig und Menschenfeind" Although her voice was hardly enough for private theatricals he put her before the footlights and made her declaim couplets. With shaking knees, tensed muscles and a trembling voice the poor unfortunate stood there to the embarrassment of all of us—and earned a striking success. The public took to her at once. They liked her nervous naïvete and her clumsiness, just as Reinhardt had liked it—perhaps they thought it was deliberate. In any case, Camilla was the success of the evening

Reinhardt had a positive genius for getting out of an actor just what was in him, and that applied not only to the man's talent. Reinhardt would make use of any feature at all that struck him as useful. For instance, he knew that the dancer Matray was as swift and mobile as a Barbary ape, so in his presentation of the "Oedipus" of Sophocles, Matray was made to rush through the auditorium with a burning torch shrieking unintelligibly The audience was frightened out of its wits and the blood curdled in its veins. Halmay he knew was a former Hussar officer and a brilliant horseman. Very well, Halmay should demonstrate his astonishing horsemanship and vault into the saddle from the most unlikely angles. And that grand old actor Pagay had the most impressive gout I have ever come across. He could move only half a pace at a time, but that with enormous dignity Reinhardt made him Philemon in the second part of "Faust" never was the aged Philemon so convincingly played.

The first triumph Reinhardt had with a production of his own was A Midsummer Night's Dream" (forget his Hollywood film version for God's sake) with which he opened the

Neues Theater It was a combination of Shakespeare's text, Mendelssohn's music and Ernst Stern's décor and costumes—the whole inspired with Reinhardt's genius for production. It was a brilliant success. More than that, it was epoch making in the art of production and all subsequent productions of the piece had to stand comparison with Reinhardt's very few survived the ordeal. It was a time of renewal and fresh departures in production Even the opera was forced to discard some of its hoary old traditions under the realistic influence of the "Salome" and "Elektra" of Richard Strauss.

There was a danger in this, of course a tendency for the brilliant producer to lose sight of the author It affected the public too they went to see Reinhardt, not the play as some people go to the great conductor rather than the piece. This is not a healthy state of affairs, but as far as Reinhardt was concerned and making all allowances for his *licentia registrandi* I think I can say that he remained true to the spirit of his playwrights. That was certainly true of his "Midsummer Night's Dream" with Gertrud Eysoldt as Puck, Elsa Heims as Hermia, and Arnold and Wassmann as Bottom and Snug Its success was so great that on the strength of it Reinhardt took over from the retiring director of the Deutsches Theater Papa L'Arronge. After that Reinhardt never had less than two theatres in which to present his ideas and there were times when he had as many as six running at once and travelling companies on the road in addition He certainly popularized the theatrical art, but he never vulgarized it

Max Reinhardt's fame spread over the world and as the theatre offers a great opportunity for a *rapprochement* and reconciliation between the peoples—a much better one in fact, than many of the more obvious ways—I decided to approach the Peace Prize Committee of the Nobel Foundation on Reinhardt's behalf. The great philanthropist Nobel instituted five prizes of very considerable value to be distributed annually There are prizes for physics chemistry medicine literature and peace. Why Nobel decided that literature alone of all the arts was worthy of a prize I have never been able to understand. The testamentary terms of reference for the bestowal of the Peace Prize (which is finally decided by the Norwegian Storting

at the instance of the Prize Committee) provide that it shall be given to the one who has done most during the year to further an understanding and *rapprochement* between the peoples. That seemed to me quite wide enough to include an artist, whose work may indeed do far more to satisfy the conditions than that of many a politician. I put my suggestion to a number of prominent people and found that they agreed with me, and then I approached the Peace Prize Committee. I had the support of Bjoernson but was opposed by Knut Hamsun, himself a Nobel Prize winner for literature. Hamsun could think of no objection on principle, but the idea that the Peace Prize should go to a Jew was more than he could stomach. His subsequent development into a Quisling and a supporter of the worst enemies of peace the world has ever known, the Nazi gang, was therefore not altogether illogical. My suggestion was not adopted. I still think that was a great pity not only on Reinhardt's behalf, but because it would have established a valuable precedent, freed the Committee from the burden of a narrow Peace Prize which has become rather ridiculous, and established a prize for artists side by side with the already existing prize for authors and certainly served the real cause of peace and international understanding better than the ineffective writings and speeches of many a successful candidate for the prize

One of Reinhardt's most valuable collaborators was Gordon Craig the son of Ellen Terry and one of the most brilliant pioneers of modern stage décor I don't know offhand any piece which was produced entirely with his décor but his fragmentary work opened up new paths in the art of stage decoration. Until then Germany had not seen a new pioneer on this field, though there were quite a number of highly talented artists who had helped to execute Reinhardt's ideas. Orlik did Schiller's "Die Raeuber" and Shakespeare's "Winter's Tale" and the Greek Aravantinos and the Czech Strnad also worked with Reinhardt, but Ernst Stern was his right-hand man and held the field for a long time A Roumanian by birth, Stern came to Berlin as a very young man, but it was not long before he held the undisputed leadership in his art.

All these men together with Gustav Knina formed a brilliant team for Reinhardt. They were always present at rehearsal

always ready to sacrifice work they had already done in the interests of a *still* better idea, always *ready to work out some* thing new and different. Sometimes things had to be changed even after the full-dress rehearsal, and then they had to work night and day to have everything ready for the *première*. I never knew a piece that was quite ready the day before the First Night, and apart from Reinhardt, Knina and Stern no one in the Deutsches Theater was ever quite certain that the *première* would really and truly take place the next day. Everything seemed hopelessly confused and everyone, or almost everyone, was running around in circles and panicking. And in all this apparent chaos I never saw Max Reinhardt lose his temper. He would sit at his desk and watch, dictating his observations to his secretary, and then they would be put into effect and the scene replayed to his satisfaction. Every objection or suggestion he had to make was put objectively and explained calmly.

No one felt insulted at Reinhardt's rehearsals, whereas at other theatres I have seen actors swallowing their wrath with difficulty at a correction or politely listening to a suggestion and then ignoring it and doing just what they thought right. But Reinhardt's authority was absolute; no one even thought of disputing it. In some theatres the producer was in much the same position as a prince of the royal blood, a musical amateur who once conducted the famous Munich Philharmonic Orchestra. When a curious concert-goer asked the leader of the orchestra what the prince proposed to conduct his answer was:

"I don't know what His Royal Highness will be gracious enough to conduct but we're going to play Beethoven's Fifth."

The twenty four hours prior to the First Night is the time in which most can be learnt about the theatre. Superstitions, old wives' tales, prayers, vows, oaths and medicine—every mortal thing, reasonable or ridiculous, is brought into play to ensure success. I knew a very pretty and very vain young actress who always wore her left stocking inside out for eight days before the *première*. And there were the diet fanatics who wouldn't eat certain foods just before the great day. One actor I knew used *to skulk at street corners at certain propitious hours in the hope* that dogs would mistake him for a lamp-post. And need I

mention the rôle played by charms, amulets, talismans, magic roots, etc.? Caruso's particular charm was a pair of special cuff links. Before a First Night Gerhart Hauptmann, a devoted suitor of a lady described by Voltaire as the stupid daughter of a wise mother Astrology was wont to consult the stars. I had a special prescription against footlight fever I don't know whether they come under this same cabalistic heading but it consisted of asafœtida pills. Apart from any suggestive effect, they were certainly a sedative.

Melchior Lengyel, the Hungarian author had written his famous thriller "Typhoon which was produced by Meinhardt and Bernauer with Gleving The critics were hostile and the author directors and actors were in despair at what promised to be a flop I liked the play and I advised the directors not to take it off as they were thinking of doing, but to leave it until after the Whitsun holidays at least. They decided to do so, and the superstitious Lengyel declared that for every night the play ran he would take a silver thaler from the box office and carry it around in his pocket. The play caught on despite the critics. In the beginning Lengyel thought it very funny to go around chinking his silver thaler in his trousers pocket, but the play proved a great success, and after 100 performances the weight of the silver thaler became embarrassing Specially reinforced braces were made and the trousers pocket had to be lined with leather to take the burden. Lengyel was no longer able to take a walk. He would toil from his carriage to the theatre and back again, and that was all the exercise he got until the run ended with the 401st performance and he was able to abandon his silver load.

That may sound like an extreme case, but most actors and those connected with the theatre are superstitious, and it is perhaps more understandable in the theatre than elsewhere because the reaction of the public is incalculable. On the First Night everyone connected with the piece whose place is not on the stage gathers anxiously in the wings to test the quality of the applause if it comes promptly and in satisfactory volume immediately at the end of the scene things are going well if it comes even before the curtain is rung down then things are going very well and if there is a few seconds pause (terrible

ordeal) between the ringing down of the curtain and the outburst of applause that is best of all because the audience has obviously been so intent on the piece that a few seconds is required for it to find its way back to reality I never knew a director no matter how experienced he might be, who knew in advance what was going to happen. And what publisher recognizes a best seller until the accountant tells him so?

It is a difficult and thankless task to try to analyse the psychological reactions of an audience to a play and particularly to humour The comedy has the reputation of being even more chancy than the serious drama. And despite all that has been written about laughter and its causes by Democritus, Weber Le Bon Bergson and others, laughter remains very much of a mystery Granted that it is caused largely by unexpected incongruity but what is incongruous to the one is often not so to the other What will make even a pessimist laugh may make an optimist weep In all my experience I have never seen a professional humorist, clown or what not, laugh really heartily Perhaps it is because their special psyche is always accustomed to the incongruous and it is not easy to surprise them. Most comedians suffer from depression they are choleric and easily irritated. They are often credulous and naïve souls. Most strikingly too they have no inclination to Bohemianism they are almost all in favour of domestic felicity a regular household and normal family life. If anyone quotes me Chaplin in disproof, I can only say but look at the number of times he's tried. Another thing I have noticed about most of them is that they have little respect for their noble profession. Knack, an unforgettable comic, had no less than eleven children, but he wouldn't let any of them come to see him perform. Victor Arnold after his great success as Molière's Georges Dandin, came to me to know whether I would help him get a nice safe agency with some insurance company Max Pallenberg the greatest of them all an improviser of astounding genius whose career was cut short in its prime in a plane crash asked nothing more of life than an occasional poker game with good friends and domestic bliss with his wife, Fritzi Massary And the great clown Grock was another one, and Guido Thielscher, Alexander and Wassmann—a depressing lot of

stay-at home birds. But the comedians are the exception, their colleagues of the boards are usually happy-go-lucky good natured and, on the whole and apart from their absurd superstitions, care free. And they almost invariably have that much in common with the wise old owl they begin to live their lives to the full only when the lights go up

Max Reinhardt's genius fructified chiefly in the German theatre, of course, but he himself and most of his prominent colleagues were not Germans, and certainly not Prussians. There were Italians, Roumanians Poles, Czechs, one Englishman Gordon Craig and many other nationalities in Reinhardt's brilliant team. His own domicile was in Berlin for years, and would probably have remained there but for the Nazis, who put an end to all art, but he had no sympathy with Prussianism and that is hardly surprising He has been called an internationalist, and he was certainly at home internationally to which my friend Cochran can vouch, who is still full of admiration for the wealth of ideas Reinhardt showed and the way in which he adapted himself to English taste when within a few short weeks he prepared the great production of the 'Miracle at Olympia. However Max Reinhardt was not an internationalist he was an Austrian, and to the wise that is the key to his character

There were sixteen different nationalities disunited under the rule of the old Austro-Hungarian double monarchy They all hated each other abused each other despised each other—and yet they were all held together by something intangible. The old Habsburg court with its tremendous historic traditions, the atmosphere of happy go-lucky and good humoured resignation to which life under the double monarchy had given rise, the institution of the café house with its strings of newspapers and its never-ending discussions, the justly famous pastry dishes, the goulasch the Wuerstel—in short, they had something very real in common after all. There were citizens ridiculously proud of being from Budapest, from Cracow from Prague, from Zagreb—yes, even from Przemysl and Komotau. But once outside the Empire and they were all from Vienna and proud of it. And when it came to the point they were all enthusiastic Austrians. The Austro-Hungarian empire was broken up after

and God in his mercy withered it away Peter Behrens had his villa built decorated and furnished in the style but it was not long before he had such a bellyfull of it that he went berserk and wiped it out altogether

The spirit of the day finds its expression in the taste of the period or better the style of the period is the practical expression of its culture This can be seen strikingly in the ordinary craftsmanship of the various peoples. The product of a Bolognese or Paduan cabinet maker is still as beautiful as that of his cinquecento predecessors A piece made in Paris to-day in the style of Louis XV can be detected as a copy only by antiquarian experts and then not from the quality of the workmanship In Salzburg too the local masons and decorators had cherished the traditions of their forbears and thanks to them it proved possible not only to restore Leopoldskron but even to rebuild it in part—the library chiefly—a work carried out under Max Reinhardt s direction with great piety and respect for the spirit of the original builders It was in this rebuilt library that Reinhardt kept his magnificent collection of books and manuscripts relating to the theatre including many unique items Unfortunately both Schloss and collection fell into the hands of the Nazi vandals. It was in this library that Max Reinhardt spent many of his happiest hours with his friends around him. I remember on one occasion for the pleasure of his guests and his friends he got the inspired comedian Max Pallenberg to play Molière s Malade imaginaire in this library before the open fireplace

In the grounds was a zoological garden including an aviary of rare and exotic birds, and an antique open air theatre. Everything that belonged to a princely house of the period was there in simple elegance and nobility The secret of the agreeable atmosphere of Leopoldskron was its natural harmony nothing was pompous and there was no straining after effect the pure spirit of art inspired those old builders and it informed the whole of their work.

There was another and very important reason for Max Reinhardt s happiness in Leopoldskron After the failure of his marriage with Else Heims he turned to Helene Thimig a member of an old and well known Austrian theatrical family

She proved a highly congenial companion and his life with her was harmonious and happy Helene Thimig was an artist and a personality in her own right, and she was by no means altogether outshadowed by her brilliant mate. I always felt there was something baroque in her own make-up She reminded me of a figure from the cathedral altar of Ulm come to life On the stage or off she was equally serene and natural. It can have been no easy task to look after arrange and regulate the domestic life of a man whose existence was so full and whose nature was so fastidious and discriminating as Max Reinhardt's, but she performed it tactfully and unobtrusively

In the beginning the dramatic arts held the field in Salzburg, but later on music more than caught up and the general musical level was raised to unforgettable heights by both Bruno Walter and Toscanini The Vienna Philharmonic Orchestra with its great leader Arnold Rosé played regularly there and the finest singers in the world vied for the honour of taking part in the Festspiele. The dramatic production was, of course, in the hands of Max Reinhardt, whilst the Vienna producer Wallerstein arranged the operas With the assistance of Bruno Walter a conductor of genius and a great stage artist operas were superbly produced and sung Bruno Walter had gone through both the musical and dramatic schools with Gustav Mahler Salzburg owes its world fame primarily to Max Reinhardt and Bruno Walter and they were worthy of each other Toscanini came to Salzburg later where his performances of 'Falstaff" and 'Fidelio became memorable in the history of music

For musicians Salzburg was already a hallowed spot, thanks to its associations with Mozart. His spirit seemed to have lived on in the town. But I think that not even all this would have sufficed to make Salzburg what it became had it not been for the delightful baroque atmosphere of the town itself with its towers and gables, its cathedral and its closed-in square its air of historic culture, its happy peaceable citizens, their quaint and delightful costumes and their mediaeval traditions. Salzburg was an inspired choice for the Festspiele, and once chosen by Reinhardt's artistic eye all that was needed was his fertile brain his vigorous energy and his tremendous

enthusiasm to bring all these things together into the services of art

Even without the Festspiele Salzburg would still be a delightful place to visit It is a real old Austrian provincial town. It is ruled by a hierarchy of pensioned-off military gentlemen and officials spending their declining years and their modest pensions Everyone knows everyone else Everyone meets in the coffee house that authentic symbol of the real democracy which prevailed in the old Austro-Hungarian monarchy Your Austrian is a denizen of the coffee house The informal atmosphere of the place appeals to him he can exist in it just as he is, just as God made him without pretence and without pose. In the coffee house he can meet his fellows without social obligation and behave himself in his own individual manner If he doesn t want to talk he stays silent over his drink or reads the newspapers, of which the true Austrian coffee-house has always a great choice And if he wants to express his opinions he will always find an audience prepared to listen to him. Rendezvous are kept in coffee houses business is done friendships are made and sealed The guest can take part in discussions or remain a silent listener as he pleases He can seek the local bubble reputation he can educate himself, he can gather information, or if he so wishes he can just rest his weary limbs. If the spirit of the old Austrain coffee house is congenial to him he will always be a welcome guest. Proprietor and waiters will smile and greet him hopefully when he comes in. Not only can he take his coffee and very good coffee it is usually but he can eat if he will and he can play games and, often, listen to music.

The murmurous voices of the other guests form an agreeable background to his own conversation or to his silence. The air filled with tobacco smoke is a pleasant change from the fresh, sometimes all too fresh, air outside An hour or two spent in that pleasant atmosphere in the evening will give him a happy tiredness and leave him ready for his bed And he makes for home with the pleasant knowledge that he will be there again in the morning for his coffee, his two soft boiled eggs served in a glass and his slice of Prague ham with brown bread and dairy butter before going out again into the busy and exhausting day After his lunch there is again the coffee-house for his black

coffee or his Kapuziner and perhaps a short siesta. Two or three hours later comes the time for his Jause and there he is again. If he is a good father and husband he eats his dinner with his family and returns to recuperate amongst his friends in the evening That, of course is the regimen of your civilized Austrian with only a limited need for the pleasures of the coffee house. There are others, coffee-house fanatics, who spend the whole day there, live there, do their business there, attend to their correspondence there and go home only to sleep leaving it unwillingly only when they must, and with the firm intention of returning to its happy fug at first opportunity

Salzburg has this institution in perfection and it also has all the other institutions of Austrian Gemuetlichkeit the comfortable Wirtshaus, the quaint cellar local the Bierhaus and little restaurants with local specialities such as Salzburger Nockerl and a variety of drinks to satisfy the most fastidious. Here in Salzburg the good old Austrian way of life is followed to the happy letter the mountains are admired from below the churches from outside, and the coffee-houses, etc., from within.

CHAPTER VI

ELIZABETH BERGNER

ONE OF THE greatest stage personalities I know and my very good friend is Elizabeth Bergner She is the prototype of femininity Her delicate, boyish Tanagra figure conceals a great soul, and her serene features are the expression of an unusual intellect Her large expressive blue eyes are those of one who thinks deeply There are few questions one can discuss with Liesl without hearing an original and striking viewpoint. In matters of art her criticism is invariably both sound and brilliant. She is, of course, a great admirer of Shakespeare, but even where the greatest master of all dramatic art is concerned she is still critical. On one occasion we went to see "King Lear' She found it impossible to sit through the whole play and we left after the second act Hardly a day passes without her receiving some manuscript or other from an author She reads everything and answers objectively

Few actresses have won the London public as rapidly as she did but there was no vanity in her triumph On the contrary success makes her more critical and still more fastidious in her demands on herself. She acted in London both on the stage and in film parts almost incessantly until her health broke down under the strain. On her recovery she worked extremely hard polishing and building her part in Barrie's "The Boy David" which was written specially for her and whose title rôle she played, once again with great success. Barrie died, the war broke out, suitable parts were infrequent, and, in addition Chamberlain's policy created a disagreeable atmosphere in which she found it difficult to breathe freely so she retired to her beautiful country house, Huntingdale in Egham where with philosophic resignation she grew maize and kept pigs and chickens.

I spent many happy hours in this house where she lived alone with her husband and once a week I used to go down and spend the evening with them We would almost invariably stay up talking into the early hours of the morning there was so much we had in common. On many such evenings there were heavy raids on London, and from her house, which was situated on a hill we could see over to London where the sky was full of exploding shells and the flashes of bombs as they went down. She had grown to love London, and such a sight was always extremely painful to her

In Germany she was one of the first to recognize the way things were going and long before the majority of people she drew her own conclusions and acted on them She left the country and came to England before Hitler came to power She hated Nazi Germany and regarded the brutal degeneration of the country and its people with horror and contempt. Although in the early days of the war in England theatre-going fell away very considerably she was overwhelmed with offers of parts, but she consistently refused to act in a play whose literary quality was not up to the high level she had set for herself. Rather than play in a poor piece she would not act at all, and she therefore went into voluntary retirement, though she desired nothing more than to have the public at her feet again for to her acting is the breath of life.

I advised her to go to America, and in order to give her courage to start afresh and carve out a new life for herself in a strange country I pointed out that the fame she had already won would make it easy for her to find her feet. She brusquely rejected what she regarded as a proposal that she should live on her laurels in America "Whoever wants to rely on past fame is not a real artist. Success must be won again each time afresh as though one were setting foot on the stage for the first time I think that attitude is typical of her greatness and of her profound feeling of responsibility towards her art It was in this spirit that she finally went to America, and it was in this spirit too that she won success there also

In all my descriptions of the various artists I have known—whatever branch of art they followed—I have refrained from attempting to pass judgment on their artistic abilities or their place in the artistic hierarchy I have described them as human beings with their physical, intellectual and other characteristic attributes and foibles, in the hope that the real critics might find material to help them in their judgments I propose to make no exception with regard to Elizabeth Bergner particularly as many good books have already been written on the subject. But if there is a master key to unlock the secret of her artistic significance I believe it lies in the invariable loyalty she maintains to the high standards she has herself imposed to the fact that all her life, whether on the stage or off, she neither says nor does anything in opposition or contradiction to her own deep artistic feelings. In short, and at the risk of sounding trite, she truly lives her rôles. And therefore she can act only real art Indifferent and inferior material is impossible for her

CHAPTER VII

GERHART HAUPTMANN

ON NOVEMBER 15TH 1931 the birthday of the great German dramatist Gerhart Hauptmann, a party of his friends and acquaintances was gathered with him to celebrate the event, including Field Marshal von Seeckt the famous Norwegian

explorer and traveller Sven Hedin, Theodor Wolff, the editor of the *Berliner Tageblatt* the Austrian publicist Stefan Grossmann, Max Reinhardt and myself In the course of the conversation the Nazis and their leader Adolf Hitler cropped up, and I asked Hauptmann whether he knew anything about the fellow He did not, it appeared, and he turned to the company in general for information. No one seemed to know much about him or the aims of his movement, but von Seeckt, as always, had a joke ready A peasant had a donkey which fell sick. He called in the vet, but the vet could do nothing and the donkey still lay motionless on the floor of its stable Other vets had no greater success, until finally in desperation, the peasant called in a quack, who bent down and whispered something into the donkey's ear whereupon the brute sprang to its feet at once. When the admiring peasant asked the quack how he had obtained such speedy results, the quack replied Simple. I just whispered Heil Hitler Every donkey jumps up then."

That was our first acquaintance with a phenomenon which was so soon to become world history—shameful world history for which the famous German dramatist bears some responsibility Hauptmann was the son of a Silesian innkeeper whose father had been one of the wretched Silesian weavers. In his childhood Hauptmann received only the most elementary education, and his youth was made more difficult by the fact that he suffered from tuberculosis. At first his artistic tendencies expressed themselves in modelling I have seen some of his work. He was obviously on the wrong track none of it was in any way distinguished. Then, like his brother Carl, he turned to the pen. His first play "Before Sunrise" was accepted by Otto Brahm and performed at his "Freie Buehne" before a membership audience. A public performance would have been impossible owing to the censorship for Hauptmann's play had as its theme the degeneracy of rich peasants and it handled the subject with brutal frankness. It made him famous over-night. There were stormy scenes in the auditorium between supporters and opponents of the play in which a birth takes place. One member of the audience—a doctor who had read the book—indignantly brandished a pair of obstetric forceps. With some difficulty fisticuffs were prevented. The next day Germany

knew that a new dramatic star had risen. In his first play Hauptmann showed both courage and devotion to truth; unfortunately he was to show himself wanting in both in later life.

Hauptmann's powers of observation were extraordinarily keen, and from the beginning he was strongly under the influence of the nascent social revolution. He was at home in Silesia, where he knew the conditions and he knew the people, and no one has ever better described this particular German type, poverty-stricken, humorous, trusting, cunning and stolid in turns. In this period of his life, to which his famous play "The Weavers" belongs, with the abortive revolt of the Silesian weavers in the nineteenth century as its theme, Hauptmann was an honest and progressive spirit, and his work was authentic and convincing. His more lyrical poetical dramas are also likely to live on in German literature, including the beautiful requiem "Hanneles Himmelfahrt" and later his great historical play around "Florian Geyer," the knightly champion of justice and mercy, and his "Michael Kramer," a middle-class drama of profound inner honesty and high devotion to duty. Nothing can affect their lasting literary value.

Hauptmann is definitely a split personality, as can be seen clearly in the later stage of his creative activity. Left to himself, with pen in hand, and perhaps under the inspiring and liberating effects of a glass or two, he has written memorable work. But later on, with a secretary and her typewriter waiting at the appointed hour, the source of his inspiration dried up. The unconscious and God-given quality was exhausted. Hauptmann did his best to compensate for its absence by turning introspective, admiring himself, indulging in pseudo-philosophy, striking imposing attitudes, and generally deceiving himself.

He was a fine-looking man with a noble head—a sort of *Goethe redivivus*. He was of middle height only, but of an imposing carriage. I knew him forty years ago, and even then he had the fair locks brushed upwards away from the dome-like forehead which merged imperceptibly into the bald skull, where the hair receded, creating the perfect poetic brow. His eyes were expressionless, but they were saved by the high, bushy brows above them, which created the impression of a poet lost

in deep thought. His nose was big and formless his lips full and rather lascivious, his symmetrical face clean shaven and although he had not the characteristic doe like eyes and finely chiselled nose and lips of Goethe, one was never allowed to forget that he liked to pose as a contemporary Goethe in appearance as well.

He was a great poseur and he became natural only in the early morning hours after a bottle or two in amusing company He was always celebrating something and if there was nothing to celebrate he would invent it. His house, not very tastefully furnished was in Agnetendorf in the Riesengebirge, but he spent only a few weeks in the year there. I often visited him in Agnetendorf. On one occasion his honest old servant, a man who had been with him for years said to me regretfully "It's such a pity the good old days have gone when he was so jovial and happy Now he s a doctor and so famous he s always so buttoned up It was unfortunately only too true. Hauptmann was always so buttoned up always so conscious of the impression he wanted to create always posing But his works were greater even than his vanity

He surrounded himself with admirers He couldn t stand being alone The royalties from the sale of his books and the performance of his plays were very considerable and tempted him to luxurious living He collected lions and he loved to have every famous man who came to Berlin at his Stammtisch in the Hotel Adlon In the summer months he would retire to the island of Hiddensee in the Baltic and the three winter months he spent in Rapallo It was whilst he was in Rapallo that he sought relations with Mussolini who invited him to Rome, and received him with great respect Von Neurath was the German Ambassador in Rome at the time and he took no official notice whatever of Hauptmann s presence A question on the subject in the Reichstag cost von Neurath his job The permanent official Carl von Schubert, caused Stresemann to express disapproval and von Neurath was recalled Later on von Neurath himself became a Minister and he revenged himself on Schubert, who was superannuated before his time It was perhaps a blessing in disguise, for it saved Schubert who was a European, from any responsibility whatever for Hitler and his regime.

It was not easy to carry on a conversation with Hauptmann. After long thought he would begin a sentence, and then very seldom end it. He would lose the thread of his remarks half-way through and then end up with "etcetera, etcetera, etcetera" However that was only in philosophical or scientific questions, in which, owing to his completely undisciplined knowledge, he was the veriest tyro In questions relating to art, where judgments are more intuitive, he was quite different, and the artist spoke in him, but that was comparatively rare. Emil Ludwig could imitate him brilliantly and often amused his friends at Hauptmann's expense

In his later years Hauptmann's style became more and more pompous, but in his best period his grasp of the dramatic exigencies was thoroughly reliable, and his work for the theatre sound and vital. The construction of a play like his "Fuhrmann Henschel" is as firm and rigid as though built on a basis of cement, but with other pieces singular defects revealed themselves in the rehearsals and had to be corrected. Hauptmann was open to advice and suggestions. Max Reinhardt did not like the ending of "Before Sundown" which, incidentally was shown at the Shaftesbury Theatre in London in 1933 with Werner Krauss. He thought that the decline of the hero provided no suitable culmination. We sat together two evenings in the Adlon over that, and finally it was decided that the old man should die suddenly of, at my suggestion angina pectoris. Thus I have also been consiliarius at a stage drama.

What are we to think of those Germans who remained in Germany after Hitler came to power although they could easily have shaken the dust of the land of slavery thievery knavery and brutality from their feet if they had chosen? Gerhart Hauptmann was one of them It is true that he was seventy when the catastrophe befell Germany and that would have served as full excuse for an ailing greybeard bound to bath-chair or bed, but Hauptmann was as active as a man twenty or thirty years younger He bathed every day in the sea whilst he was at Hiddensee, and in winter in Rapallo he would stride around vigorously lightly clad in a sort of *toga candida* he favoured Constitutional inertia might make it impossible for a man of his age to start a new life somewhere else, but there was

no inertia about Hauptmann. The only reason he stayed in Germany was because he was unwilling to go

If any man had cause to be thankful for the "system period" the "fourteen years of shame and dishonour"—as the Nazis were accustomed to refer to the era of the Weimar Republic—it was Hauptmann. He was its representative literary figure, he was honoured on every possible occasion, his plays were constantly played at the leading theatres throughout the Republic, and his books were bought and read in enormous editions. But when the Weimar Republic came to an end he stayed on, and saw his loyal Jewish publisher deliberately pushed to the verge of ruin, saw some of his friends brutally murdered and others forced to flee leaving their possessions behind them, saw his people brutalized and robbed of their freedom, saw innocent men and women dragged off to concentration camps to torture and death, and by his silence he connived at it all. He knew what was happening There was no one in Germany who did not know what was happening But Hauptmann was unwilling to know And even if he had not sufficient civil courage to raise his voice in protest, at least he could have left the country and gone to his beloved Rapallo, where his close friend Fritz von Unruh and the family of his publisher were living in exile

Yes he would have lost his German royalties I know but his translation royalties would have been quite sufficient to grant him an economically care-free life in exile. However his personal comfort and his desire for luxury kept him in Nazi Germany Even granting that he may like Hindenburg and his wretched adviser Meissner have regarded the whole Hitler affair as an episode, an experiment which would soon break down he could still have left the country easily enough when it became clear that he was wrong

But Hauptmann went out of his way to identify himself with the Nazi regime and he delivered a series of deplorable broadcasts. He must at least, have felt very much ashamed of himself for he sent his son Benvenuto to me in London as the bearer of his excuses and the latest edition of his collected works. I told Benvenuto what we had all expected of his father and what we now thought of his attitude. Benvenuto denied

that his father had degenerated into a Nazi lickspittle, and declared that the broadcasts had been faked by Goebbels and delivered in his father's name. Incidentally when Furtwaengler was in London he assured me that the same thing had happened to him. I cannot judge the truth of this, but both Hauptmann and Furtwaengler had every opportunity of breaking with foul people of that type, and neither of them took it. Through Benvenuto Hauptmann sent me the excuse we shall probably hear from all of them now he had stayed on out of a feeling of duty towards his country, on the watch, so to speak, lest worse befall

He prevented nothing and made no attempt to prevent anything In the notes I made before writing this depressing chapter the heading reads "Treat Hauptmann with consideration" If I could have found any excuse which would have held water for a fine artist and an intimate friend, I would have been only too willing to do so But I could not. Gerhart Hauptmann the author of "Die Weber" "Florian Geyer" and "Fuhrmann Henschel" the greatest dramatic champion of social freedom in Germany has revealed himself as a narrow soul without human dignity and his character unworthy of his own high art. And his greatest offence is not the acts he committed but the acts he omitted. In his moving drama "Hanneles Himmelfahrt" a half-realistic and half visionary piece, a feverish child asks "Are there then sins that can never be forgiven?"

Yes Gerhart Hauptmann there are.

CHAPTER VIII

DAVID OLIVER LUBITSCH MARLENE, STERNBERG PASCAL AND KORDA

WHEN ONE REALIZES that there is just about as much capital invested in films as there is in the steel industry one begins to have some idea of its economic importance. Obviously the film industry caters for a world demand of enormous dimensions. At first it operated from a purely commercial standpoint, and

the level of its productions was deliberately kept low enough to appeal as widely as possible hence too the great part that sensationalism played in its very early days The invention of the sound film and of technicolour furthered the development of the film to its rightful place amongst the arts, and in addition the general public, as it becomes more and more educated in the new art, begins to put higher and higher æsthetic and artistic demands on film production

For thirty five years now I have had the good fortune to be a close friend of David Oliver one of the pioneers of the film industry and from him I have learnt much about its early years Oliver was a genius in his way and the development of the films owes a very great deal to him However he never came into the limelight and he is hardly known except amongst his colleagues of the film industry David Oliver's own career has something of the screen play about it poor boy driven from home by an unkind stepmother (believe it or not) goes out into the world with only a shilling or two in his pocket to make his fortune—and succeeds! Oliver was eighteen years old when he left his native Austria and landed in Bremen He was a highly intelligent lad and he soon had a job with a firm of real estate agents One of his tasks—a most significant one as it turned out—was to arrange for the sale of the premises of a bankrupt theatrical company Someone in Paris nibbled and David was sent off to the City of Light to land the fish He failed

Strolling along the boulevards a little depressed by the failure of his mission and killing time before his train left for Germany in the evening he saw a queue waiting to go into what he assumed was one of the usual *variétés* It struck him as a good way of passing the time so he joined the end of the queue. When he got inside it turned out to be one of the earliest exhibitions of short Pathé Animated films He stared at the flickering images in amazement and incredulity and was so interested that after the performance he went to see the manager to learn all about it and make quite sure there was no trick—silhouettes of living figures, or something of the sort

The manager also the proprietor was a good-natured Alsatian and he willingly explained to the interested youth just how the thing worked. And Oliver had a brilliant idea. Why not

not take over the derelict theatre which was still on his hands and show these films? When he returned he approached the brothers Hagen with his idea and persuaded them to put up 28,000 marks whilst he himself scraped together 12 000 marks as his own share in the venture. The first film theatre in Germany opened on a Friday in the year 1903, and the first day's takings amounted to 6 marks. By the following Sunday they had risen to 7 marks. And so it went on until new bankruptcy threatened The public had some sort of idea that the danger of fire was enormous owing to the celluloid, and they were not prepared to risk their valuable skins to see moving pictures projected on a wall.

David dashed off to Paris again to see if his Alsatian friend could give him any advice, and he found that the business there was popularized by Pathé Animated cars which drove slowly along the main streets with a film camera arranged very visibly on a tripod, whilst an operator—no doubt with his cap on back to front—turned the handle and filmed the crowds. At the same time other men distributed handbills informing the public that they could come to the theatre and see their living images on the screen. David saw the possibilities of that returned at once to Bremen and did the same. It worked and the public began to pour into the theatre, on which, in the meantime David had taken an option for 28 000 marks. Despite the preliminary difficulty he had never ceased to believe in the future of his idea.

Before long business was so flourishing that he began to look around for larger premises. He found a large hall with a very small stage belonging to a brewery in one of the suburbs. A brilliant and persuasive business man, he explained the whole project to the directors of the brewery and proposed that they should let him show his films in the hall for three years without rent and that after that they should pay him a rent of 30,000 marks a year for his pains. Their reward would be the sale of their beer to his audiences. This was a rather unusual and topsy turvy rental agreement, but the directors proved open to new ideas and they agreed. At first the public was admitted free and received a glass of beer and a pair of sausages for 50 pfennig—approximately sixpence But soon the audiences grew so rapidly that David was able first of all to discontinue the

a Cinema, Picture Palace Electric Theatre, Bioscope, or whatever name it went under

The financial success, too, was enormous. At first the film was hired out at what was then the normal rent of 100 marks a week, but it drew the public in crowds everywhere, and it drew them for weeks and even months on end so that the fortunate producers were able to increase rentals rapidly until they reached the dizzy height of 2 000 marks a week, and even at that price theatre proprietors fell over each other to obtain the marvel The total costs of production for this film was 30 000 marks, and the Nordisk Company netted the handsome profit of over five million marks on it.

In the meantime, and largely on the basis of the experience of the Nordisk Company the film industry was developing rapidly in the United States. To-day British and U.S production far outstrips continental production and holds something like a monopoly position in the world

In 1912 Oliver controlled the Union Theatres (U T) which he operated as a subsidiary company through which he exercised a controlling interest on a production company Union) which produced a series of short comedies on the adventures and misadventures of a shop assistant. The leading rôle was played by a young comedian named Ernst Lubitsch who also began to direct them. These Lubitsch comedies proved very popular and the Board was highly satisfied with Lubitsch until it heard that he entertained the absurd notion of producing tragedies. However Oliver himself recognized the qualities of the young Lubitsch and decided, against the opposition of his fellow Board members to risk a little money on Lubitsch and give him a try-out. The first result was a rather uneven but undoubtedly arresting film called The Eyes of the Mummy" It was in this film that a young Polish dancer made her debut in the leading rôle. Her name was Pola Negri. It was with Pola Negri that Lubitsch later secured his greatest triumph "Madame Dubarry" which achieved a world wide reputation and brought them both Hollywood contracts.

An amalgamation of renting interests, studios and laboratories with the Oliver Nordisk Group eventually led to the formation of the German UFA. The German Government and the

General Staff were quick to realize the propaganda value of this octopus and its importance for influencing public opinion, and from then on Oliver who held different views as to the task of the cinema, came into conflict with his colleagues, and finally he sold out his interests. A little later the German UFA Company went bankrupt, with the doubtful distinction of being the first failure in the film industry

For a while Oliver concentrated on production, and together with Eric Pommer he produced that classic of the silent screen 'The Cabinet of Dr Caligari" Pommer assembled a star cast headed by the young actor Conrad Veidt, a leading exponent of the weird and the creepy on the screen Oliver's main contribution was in the designing of the sets, for which he engaged the futurist painter César Klein

Later Oliver became more and more in demand by the banks as a consultant on finance when film companies got into difficulties. The years between the two world wars saw the rise of his second cinema circuit, backed by powerful financial groups, and Oliver began to build again cinemas in period styles for the middle class, modernistic little cinemas for the intellectual and sophisticated, and splendiforous halls for the multitude. The pinnacle of his building achievements was achieved in Hamburg with an auditorium to seat 4,000 and a stage suitable for a cinema, for plays or grand opera. The stage machinery was the last word in modern cinema and theatre technique. A powerful hydraulic system enabled a whole orchestra to rise or disappear A button was pressed, and the front part of the auditorium sank from view and a great platform arose to extend the original stage. An illuminated glass floor gave an effect of transparency to the ballet—to mention a few of the technical miracles.

The advent of the Nazis forced an unwilling Oliver into the limelight he disliked The Nazis forbade the showing of any film starring Jewish actors or actresses. Oliver defied them by presenting the British film "Catherine the Great' with the Jewess Elizabeth Bergner in the title rôle at the Berlin cinema "Capitol A gang of Nazi hooligans raided the cinema and it was impossible to finish the performance The next day a bomb was thrown at Oliver s car who then decided to leave Germany

He is now in this country as full of ideas as ever and his brain teeming with new plans for the future.

The old black-and white silent film was not quite so limited as is generally supposed to-day and it had its attractions The relation of the audience to the film was much that of a deaf man who has learnt lip-reading In some respects the emotions found a fuller expression in the old silent film than they do with the sound track film and an impressive pantomimic art developed which was quite as national and racial as sound films are to-day by the language in which they are played.

In the early days of the film's development it looked almost as though the industry was going to develop into an Austro-Hungarian monopoly Most of the pioneer film men like Oliver Fox, Goldwyn Meyer Lubitsch and Czukor came from the old double monarchy Almost all these men are still active in the film industry and new prominent film producers have come forward also from the old double monarchy such as the three Korda brothers Alexander Vincent and Zoltan Joseph Sternberg and Gabriel Pascal I know most of them, and I was friendly with many of them, and thus I was in a very favourable position to observe the development of the industry

At first films were made out of doors with whatever natural background offered itself, and it was only much later that production went into the studios. Then came sound. Many many years ago in New York Edsel Ford gave me a demonstration of sound in connection with the film with the assistance of special photo-cells imported from Germany I watched the development of studio production, the perfecting of lighting technique, and the working out of all the tricks and technical accessories which went to the making of films, first in the Neubabelsberg studios just outside Berlin, and later in Elstree, Shepherd's Bush and in Korda's great studio grounds at Denham. To-day the studios of the film industry are reminiscent of fairyland. There is hardly any aspect of modern technique that the film has not taken and used for its own purposes. The finished picture on the screen gives the film-goer no inkling of the work, the technical apparatus and the personnel which have gone to make it. It is a long and arduous passage from the book (if the film is based on a book) to the

shooting script. Every scene, every change of scene, and every bit of business must first be carefully thought over and worked out. The décor the sound technique, the lighting effects, the acting—everything must be worked into a harmonious whole. And when the film has finally been shot it is far from finished It is in thousands of takes and the best have to be cut out and carefully joined together to make up the perfect whole.

No one who has not witnessed the actual shooting of a film can have any idea of what is involved, or know why perhaps a scene which takes up only a minute or two when the film is finally shown actually took days of hard and complicated work on the part of the whole company to make. It is nerve-and sinew-destroying work, which makes even the high salaries paid to those who engage in it seem not too high. The whole artistic and technical personnel is on the set the whole day working or waiting to work. One scene may be shot thirty or forty times before the producer is satisfied that he has got the very best possible out of it. *It is terribly hard work*, not only for the individual artist, but for everyone engaged.

The two-dimensional photographic art has its own special laws, and only experience can teach just where the stress must come in a living picture to get the best possible out of the camera. In the last resort that is the producer's job It is no easy one, and therefore good producers are rare. He is the supreme captain of the undertaking and it is he who must maintain the discipline of the whole and subordinate the entire apparatus to his artistic will. The essential position of the producer is a temptation to despotism, and some of them are inclined to over rate their qualities. I remember a famous producer telling me rather boastfully that he could make anyone into a star if he wanted to. There is something in that, of course, for the film public is highly suggestible. But for the overweening *producer who has a run of successes behind him there comes* always the unexplainable flop to bring him down to earth again. If he really is a good producer we must suffer a little vanity even megalomania, gladly it is difficult to avoid in his position.

The film public is larger than any other and all those who are prominent in the Jupiter lights are prominent all over the world Their names are better known than that of any general

politician or scientist. The popular film star of either sex is besieged by admirers. To move around incognito is impossible for film favourites wherever they go they create a sensation. A film star too must be a man—or woman—of real character and human worth if he is to keep his head amidst so much adulation. But most of them get used to it, and when they are alone or with a small group of friends they are simple and human again. I have witnessed that refreshing change so often, and always with relief and satisfaction.

At first film acting was regarded merely as a branch of stage acting but in reality the relation between film and stage is a very loose one. The actor on the stage is comparatively limited in his possibilities he is dependent primarily on himself and he achieves his success (or he fails) on the strength of his ability to represent the art of the playwright. A film actor has many aids to success, and if he is a prominent player he often has parts written to suit him. So different is the technique involved that a competent stage actor can fail miserably on the screen whilst the film star pure and simple is usually ineffective on the stage. When the great Reinhardt turned to the film even he was a failure, but a moderate actor of small stage parts named Emil Jannings proved a towering success on the screen. No the screen and the stage are two different arts, and they each follow an independent line of development. It is true that some fine stage actors have also been successful on the screen but this was due to their adaptability to the new medium. On the other hand I don t know of a single film star proper who was ever a success on the stage. There is a genius for film acting as such and actors and actresses like Chaplin Garbo and Dietrich have it in full measure.

I was in a position to observe Marlene Dietrich s career from the beginning. As a child she was something of an ugly duckling with a plain, freckled face and long gawky legs. But her mother was very beautiful, and that was no doubt the promise for the future. Very early on she showed considerable promise as a violinist, and she left school before the normal time to study in Weimar as a pupil of Pretorius. At the age of sixteen she went to Berlin and secured an engagement to play with Mischa Spoliansky's orchestra at cinemas in the days of the

silent film. Even at that time she was anxious to become an actress, and she managed to secure a small part in one act of a Reinhardt play The scene was an evening party and all she had to do was to sit at a table and play or pretend to play bridge. A well-known *couturière* confident that Marlene would make her way backed her by providing a beautiful toilette. After the dress rehearsal she returned to the dressmaker's despondently with the news that Reinhardt—in his wisdom—had insisted that she should sit with her back to the audience. The dressmaker's answer was to cut the back out of the dress down to the waist—and Reinhardt was foiled. One of Berlin's *leading dramatic critics wrote the morning after the First Night* 'I'm afraid I found it impossible to concentrate properly on the performance of the star for my eyes were glued to the enchanting back of the delicious blonde at the bridge table."

But her first real success was in Spoliansky's revue, "It's in the Air!" By this time the Ugly Duckling had become a Swan and a very beautiful one indeed (need I mention it?) and everyone who saw her in the revue was delighted. Her success on the stage made her ambitious to go into the films, but although her husband (she married young) Rudolf Siebert, was employed by the UFA company and she therefore had some influence, she was turned down again and again by the experts, who unanimously declared that she was not a filmable personality—photogenic was the word they invented. Disappointed, she continued to act on the stage until one day and quite by chance, Joseph Sternberg saw her in Georg Kaiser's "Two Ties at the Berliner Theater

Sternberg had just been commissioned to make a film of Heinrich Mann's well-known book "Professor Unrat and he was looking for a star to play the female lead. He saw Marlene, and was so struck that he engaged her at once—that is to say he was willing to engage her at once, but Marlene had been intimidated by the foolish experts. She was beginning to make a name for herself on the stage, and she felt disinclined to sacrifice a promising stage career for the possibility of a failure on the screen. It took all the joint powers of persuasion of Mischa Spoliansky and Joe Sternberg to bring her round, but in the end she agreed *The rest you know The film was called*

"The Blue Angel" It was a tremendous success, and Marlene became instantly famous, and thenceforth her popularity was unexampled.

As so often in theatrical and film matters, luck played a big rôle. It was sheer good fortune that brought Marlene to the notice of Sternberg but after that it was a combination of their two talents which earned the success which ensued. Sternberg was artist enough to recognize the value of the gem which chance had cast before his eyes and once he had it he gave it ample opportunity to shine from every facet and in every suitable light. Hollywood and still further success was the next stage.

I met Marlene again in London when she was playing opposite Robert Donat in "Knight without Armour" produced by Alexander Korda. She was at the height of her fame and popularity then. If she came late into a theatre the performance was interrupted. When she went into a restaurant the service stopped. On the streets she ran the risk of being torn to pieces by hysterical mobs anxious to tear her clothes up for souvenirs. I was with her in Venice when she was literally mobbed by a distinguished international public, and things might have gone badly for her had not a strong force of police intervened vigorously to save her from the clutches of her adorers. I have seen similar though fortunately not such violent scenes with her as their centre, in Salzburg Paris and Cap Antibes. She was always refreshingly calm, standing in the middle of the adoringly threatening crowds, smiling and conducting herself always with great natural dignity

She was well aware of her powers, and she did not hesitate to use them when the situation made it appear desirable. On one occasion we drove up to the Restaurant Fouquet when the Champs Elysées was closed by the police for some reason or the other Immediately a group of police rushed up threateningly and I felt very uncomfortable. "Leave it to me," Marlene whispered. "I'll settle that." And she opened the door of the car and put one foot out directly on to the pavement remaining seated with the other in the car and smiling bewitchingly at the angry policemen. Whether it was the beautiful smile or the fabulous leg in a wonderful silk stocking visible well above the

knee, or a combination of both, I don t know but the atmosphere changed in an instant. All those irritable policemen suddenly remembered that they were very gallant French gentlemen with an eye for beauty and with the greatest possible politeness we were escorted to a convenient parking place just round the nearest corner and not a word was said which sounded in the least like *une amende*.

When a person becomes the ideal of many and his conduct determines that of the majority then that person is a genius. Marlene was such a genius. No one has ever outdone her on the films. She was greatly blessed by nature from the start from the tips of her well-manicured toe-nails to the crown of her lovely head of hair she is beautiful—and everything is genuine, I can vouch for that. However nothing is so good that it can t be improved, and Marlene has enriched the cosmetic armoury of the beautiful woman. Her high cheekbones have become an attribute of beauty her horizontal shoulders have set a lasting fashion, and to this day the elegant woman pads the shoulders of her costumes to achieve that line. Marlene has very long finger nails. One night in Venice one of them split. Oh, catastrophe! I had to knock up a dentist to splint the parts with dental cement.

Marlene has a voice whose tone is reminiscent of a cracked pot, and yet when she sings her public is enthralled, and her records are sold in enormous numbers. Not only did she use her admitted beauty to the greatest advantage, but she was clever enough to use what are usually regarded as blemishes with equal effect her prominent cheekbones, her square shoulders, her voice—everything has gone to make up her unique and fascinating personality The idol of millions and the ideal of feminine beauty and grace, it would have been understandable and almost forgivable if she had suffered from swollen head, but Marlene never did She became neither proud nor arrogant, and she never gave herself airs. Amongst her friends, in whose company she feels more at home than anywhere, she has always remained the same friendly charming modest Marlene, and none of her old practical housewifely qualities have vanished. She is a good mother a loyal wife and a devoted friend. She will still talk with you animatedly about

the right way to prepare the nockerl for the goulasch and she still cooks and bakes with all her old interest and concentration. And how well she cooks!

The art of the film producer is quite different from that of the stage producer A stage play will not permit of all too many liberties, and a good one stands in no need of them. The art of the stage producer must be firmly based on the art of the playwright within the limited possibilities of stage technique. But the film producer can let his imagination run riot unlimited technical accessories are at his disposal and the art of deception is much easier to practise on the screen than on the stage. A film is made up out of a multiplicity of mosaic work which is fitted together and fused into an artistic whole by the genius of the producer The Aristotelian trinity of time, space and action has no validity for the film. If a transition is needed for text or action there are a hundred and one ways of providing it in the film and enriching the whole with new ideas.

Joseph Sternberg was a producer whose instinctive feeling for the possibilities of the film and whose knowledge of its technique were unerring He was a little man of slight build with small lively eyes and a generous growth of hair The rapid changes of beard and moustache styles often camouflaged him almost out of recognition. He is an artist of fine feeling and subtle taste with a high sense of artistic responsibility To watch him at work means to marvel at his thoroughness and his foresight. He knows the capacities of his actors intimately and he can get the last ounce out of them. He is a great producer who can get striking results with an economy of effort and material.

Gabriel Pascal is a different type entirely both in appearance and in methods. He has the broad build of an athlete who has let himself grow a trifle over plump He is a human symphony in black, with raven hair a dark complexion like a gypsy two eyes like coals which belie the plump friendliness of his face and seem to look right through you. He is a dynamic personality with an unrestrained phantasy He knows clearly what he wants from the start, but the means he adopts to obtain his results change constantly until finally he has decided which method is best suited to his aim. He uses his personnel both

technical and artistic, to the full and is never wholly satisfied. Until his masterpiece is finished he is like an elemental force which nothing can hold up

Sir Alexander Korda is quite different again. His methods remind me of Reinhardt's. At work he is calm and consistent. Everything he does is carefully thought out, planned and regulated. There is nothing capricious about him. It is impressive to observe how a youngster from a simple old-world Hungarian village like Puszta Pásztó has grown into a man who has learned to think and act on the grand scale, ignoring all petty arguments and motives. Only a man who has grown up without a tradition can create in the grand and independent manner free of all prejudices, which characterizes Korda's work. Originally he was a journalist, and it is no doubt to that he owes the firm grip on reality which all his productions show He is swift to seize an idea out of a hint. On one occasion he was in a taxi held up in a traffic jam. The Cockney driver cheerfully passed the time by singing a popular music-hall hit immortalizing the marital foibles of Henry VIII For Korda it was the germ of a great idea. Henry VIII still lives in the memory of the ordinary people. He is a popular monarch. Let's film him. And his epoch-making British film 'The Private Life of Henry VIII' with Charles Laughton in the title rôle, was the result.

There were British films before Korda, but the climax of a greater birth was undoubtedly due to him. In one respect he is very different from most other film producers. A good "box office" is not his aim and object. He strives to produce films of high artistic quality in the belief that that, too must pay He has been right. He is a man of large conceptions rather than careful details. Others can fill those in if necessary I am convinced that in any walk of life demanding a broad outlook and great organizational talent Alexander Korda would have made his mark.

CHAPTER IX

LISZT THOMÁN AND THE HUNGARIANS

FRANZ LISZT himself a born Hungarian proud of his origin, once declared in an essay that there was no original, or native Hungarian music, and that what was generally known as Hungarian music was, in fact, Oriental music imported from Egypt by the Gypsies which had, despite its acclimatization, never lost its original Oriental character This contention produced a storm of controversy in Hungary The Magyar thinks a very great deal of his music, and Liszt's statement was an enormity and unacceptable despite the great musical authority of its protagonist. The only effective argument the Hungarians could use against him was no argument at all it consisted of excommunicating him as a Hungarian.

Liszt doesn't seem to have taken this bell book and candle business very much to heart, and he continued to live his far from penitential life flitting from one capital city to the next, returning when it suited him to his base in Weimar to rest and devote himself to new compositions (and to Princess Wittgenstein) As Liszt showed no signs of capitulating the Hungarians approached him and did their utmost to get him to withdraw his verdict on their music After all, he was a Hungarian and becoming more and more famous and the Hungarians were very anxious to claim him for their country and be proud of him without any disagreeable flavour However not only did Liszt refuse to go to Canossa, but he refused to make any concession which might have saved the face of the Hungarian pandits As they were more anxious to have him back in Hungary than he was to return, the excommunication just had to be forgotten, and Liszt was finally persuaded, with all sorts of promises and concessions to take up his residence in Budapest, where he lived for some years, as a result of which the town became one of the world centres of music. Students thronged from all parts to the newly founded High School for Music, and it was here that Ansorge, Lamond Sauer Ilona Eibenschuetz, Reisenauer Rosenthal and many other notable musicians were trained

Amongst them was an infant prodigy named Stephan Thomán. He was born in Ungvar (Uzorod) one of the filter stations of the Austrian Jews moving to the west from the north-east of the old double monarchy either *via* Hungary or *via* Lemberg (Lvov) or Cracow to Vienna. They spread like a stratum of fertilizer over Europe. Leschettzky, Kreisler, Reinhardt, Hubermann, Schnabel, Muni, Bergner, the Kordas and, indirectly, Yehudi Menuhin were amongst them. And on Russian soil only a little way away was Anton Rubinstein, whom many placed above his contemporary Liszt, the great virtuoso of the piano. And Americans like Irving Berlin, Sam Goldwyn, Czukor and Lubitsch often prefer to be "from Vienna" or Budapest or New York, but in reality they all come from that truly blessed spot in the north-east of Austria. An enormous amount of beauty and happiness has come to the world from that geographical corner, held in abhorrence by many conventional souls as the breeding-ground of European Jewry's latest migration. Even a great soldier, the "Australian" General Monath, came from this quarter, where his parents and their parents had printed prayer books for the local synagogues. Men and women full of drive and initiative have come from there, suddenly, after many, many centuries of life in peasant surroundings, a life without excess and strongly tinged by spiritual and religious influences, to pour into the west and expend their dynamic pent up forces and give more than they receive.

Stephan Thomán was one of them. Liszt recognized his great talent immediately and admired his nobility of character. He treated him not merely as a pupil but as a friend, often sending the younger man to represent him. After the death of Liszt Thomán took over all his treasures, and guarded them until he himself died. He upheld the great tradition of Liszt, and in his home there was a special room of Liszt relics. Not only did the house hold these priceless memorials, but the whole spirit of it seemed informed by the personality and the greatness of Liszt. No biographer of Liszt could afford to miss this museum which is the equal of that other and more famous museum in Weimar. Thomán could talk animatedly about each exhibit with intimate knowledge, and, as he talked, the artistic genius and warm humanity of his great friend seemed to live again.

But Thomán was no blind worshipper of Liszt He told me that the famous virtuosity of technique with which Liszt astounded the world had long been outdated and that a really talented pupil of our day would equal Liszt's technique. For an international performer Liszt's piano technique would no longer be sufficient, would no longer satisfy a sophisticated concert public Kreisler told me the same of the famous Paganini's technique it would fail to satisfy present-day international concert demands. These are no attempts to denigrate the extraordinary performances of earlier geniuses Nothing stands still, and certainly not the technique of music As it advances so the demands on it grow

Stephan Thomán was a short and rather frail little man with a dolichocephalous head. He was not a good looking man by any means, but his powerful nose his great dark eyes and his neat beard made his appearance striking And once he had begun to speak there was no doubt left that here was a real personality He came from a well to-do family his wife brought money into the marriage and his own income from music was very considerable, so all in all he was in a position to help very many needy students of music and others and he did so liberally He was always ready to support any artistic talent, whether it was musical or not. It was he who first discovered the artistic talent of a lad named Philip Laufer the son of very humble parents He got him commissions and enabled him to continue his studies in Munich. The lad justified the confidence Thomán had in his artistic ability and he made an international name for himself particularly in this country You certainly know him better as Philip de László In England he strapped on a terrific armour of snobbishness, but it says something for his character that he never forgot the debt he owed to Thomán and he spoke about it readily to the end of his days. Apart from this one chink, Philip de László was the most high and mighty *pictor laureatus* of English high society His imposing Hampstead studio is now the Catholic chapel of Sir Thomas More.

Thomán was more than a pianist, but his special love was for the piano. He had small, almost quadratic hands, with short stumpy fingers, in most striking contrast to the long fingers of

his friend and master Liszt. It seemed almost impossible that with such hands he could play whole octave passages with tremendous virtuosity but he could and did. Other pianists amongst my friends have (or had) rather similar hands—for instance, D Albert, Busoni and Schnabel. When Emil Orlik was doing his Beethoven etchings he took the hands of the great pianist Ansorge as his model. I don t know whether the orthodox chirologists regard this quadratic muscular type of hand, with its shortish and almost uniform fingers and short, thick thumb, as characteristic for exceptional talent, but in my experience it is so though, of course, there are exceptions—for instance, the hands of Einstein which are almost feminine with their long and rather pointed fingers.

Thomán s chief genius lay I think, in his teaching. The piano talent of Hungary for the past fifty years can be looked upon directly or indirectly as his pupils Jolanda Mérö Ernst von Dohnányi, Zoltán Kodály and Béla Bartók, to mention only the more prominent. Dohnányi was another infant prodigy He gave his first concert at the age of five, and by the time he was eighteen he was world famous. His technique and his musicality were equally extraordinary As a young man he had to compete internationally with such giants of the international concert hall as D'Albert, Busoni, Carenno, Moritz Rosenthal, Emil Sauer Alfred Gruenfeld Ansorge and Paderewsky He had one advantage over them all, and that was his absolute lack of any concert inhibitions, embarrassment or shyness, and the ease and naturalness of his attitude was conveyed to his audiences and put them at their ease completely To listen to Dohnányi was to relax. Whether he was playing to a small circle of friends or in a great concert hall before an audience of many hundreds made no difference whatever to him or his playing One had the feeling that the public was just not there for him and that he was playing for his own pleasure.

But later on Dohnányi suffered a sudden psychological inhibition. Up to his twenty-fifth year nervousness had been absolutely unknown to him, and then, just before a concert in Stockholm, he was so overcome with fright that the concert had to be called off. For ten years after this event Dohnányi made no public appearances at all. Chopin was another artist who

suffered a similar experience except that in his case it lasted the rest of his life. A concert he gave in Paris proved such an ordeal that he never appeared before the public again. In Dohnányi's case the attack was a blessing in disguise, for in those ten years he devoted himself to composition and deepening his musical knowledge. To-day he is the very active head of the Budapest High School for Music.

In 1910 Thomán was in Berlin and during that visit he told me about a remarkable youngster who had come to him as a pupil. A regular little crackpot as he described him. It appeared that this young pupil simply ignored all the rules of music, harmony and contrapuntal arrangement and took no notice of time or signature. I just wouldn t have taken him but he plays the piano marvellously The youngster was Béla Bartók, to-day one of the leading modernist composers Apart from being a musician of character who refuses to be limited by any orthodoxy Bartók is also a man of civil courage When the Horthy regime passed the first anti liberal ordinances he drew up his roots and went to the United States. Bartók s strength, like that of his friend Kodály lies in the music of the people. Together the two wrote one of the most remarkable books of musical literature. It threw new light on Hungarian folk music. They contended that what was generally recognized as Folk Music was not authentic and that quite independent of this Ersatz Music' there really was a folk music amongst the peasants, an older and more beautiful music shared by the Hungarian, Slovakian and Roumanian peasants It was from this older folk music with its deviating tonal scale that Bartók drew inspiration for his modernist compositions.

I first met Kodály by chance. I had just arrived in Meran when I heard that Toscanini was conducting the Psalmus Hungaricus at the Scala that evening I immediately went on to Milan, and arrived at the concert hall shortly before the beginning of the concert. There was not a ticket left and Toscanini had a chair placed for me with the orchestra. After the performance he receives very few people in his dressing room because after the rigours of conducting he, like most conductors, changes When I came in the Olympian was rubbing himself down furiously with a towel and ejaculating

enthusiastic comments about Kodály's wonderful piece. He was still full of it and seemed delighted to have conducted it. Standing there listening to this stream of praise and delight was a modest looking little man of frail build with a small, reddish beard who seemed not to know where to look. He was still wearing a rather sun-bleached overcoat, and he twiddled a wide-brimmed soft felt hat in his hands helplessly

That was Kodály As helpless as a child and with the serene eyes of a chosen spirit. He found his tongue only later on when we were all seated in the restaurant Cova with a good meal and a bottle of Chianti, and he felt more comfortable. Then he began to answer Toscanini's eager questions concerning the orchestration, the nature of the variations and the general spirit in which the piece was conceived. But he still seemed a little lost and embarrassed, and he explained that the performance had been an experience for him too. In Toscanini's hands it had taken on a new and wonderful character and he had not yet grasped it all himself. I have noticed this with composers more than once. Richard Strauss was often really surprised at the beauty of his own music when he first heard it interpreted by a better conductor than himself—that is, by Weingartner Muck or Fritz Busch

The two friends Bartók and Kodály who might be compared with the brothers Grimm for their keen professional interest in the peasantry are phenomena almost entirely independent of orthodox Hungarian musical life, which revolves around the founder of the Budapest Philharmonic Orchestra, Count Albert Apponyi, a highly educated man with a wide knowledge of music. The beginnings of musical education in Budapest were very modest, almost poverty-stricken. There was a private conservatorium for music, and twice a week operas were given in the National Theatre. The music world was ruled by Franz Erkel, the composer of the Hungarian National Anthem. No one had a chance to develop in his orbit, with the result that any independent talent was driven out of the country and this happened for instance, to Hans Richter (Richard Wagner's great collaborator was a Hungarian) who gave up his post in Hungary very regretfully for he was devoted to the Hungarian countryside and particularly to his father's estate in Fehé

megye on the Danube. Richter's influence on the development of music in England was very great and the traces of his activities in Manchester and Edinburgh are visible to-day He always remained loyal to his own country which he loved and when I met him he still spoke Hungarian absolutely fluently

The narrowness and inadequacy of this situation ended with the foundation of the Royal Opera in 1885 and the opening of the High School for Music That is to say the situation much improved but it was still not altogether satisfactory The cancer of small States is nepotism, often complicated and aggravated by chauvinism. In such circumstances the test is not one of value, and unless a talented man happens to have the other qualifications necessary to make him acceptable in the eyes of the little panjandrums he has no chance of making his way Franz Erkel's son was a talented conductor but no more and his abilities were incomparably below those of men like Arthur Nikisch, also a Hungarian and Gustav Mahler but Nikisch was unable to find a place for himself, and after only a year Mahler had to give up the direction of the Opera House to make way for a mediocrity like Raoul Mader The Budapest Opera became a sort of trial theatre Innumerable talented artists won their spurs there and then went out into the world

The fault does not lie with the Budapest theatre public, which is both understanding and critical It is not easy to pass muster in their eyes. They form their own judgments and they are not to be intimidated by international reputations On one occasion when Caruso sang in Budapest he was out of voice It would have been better had he not sung at all The Budapest public barracked him It was the only failure of his career and, as he admitted subsequently it was deserved. The same thing happened to no less a soprano than the great Galli Curci. The singers at the opera changed frequently but the orchestra was unique, and many of its members took part regularly in the Bayreuth Festspiele to mention only the great harpist Mosshammer and the cellist David Popper

Popper was an inspired performer—and the meanest man I have ever known. He was mistrustful suspicious, sarcastic and witty He practically kept his family at starvation level, and I had the devil's own job to get enough money out of him to

secure proper attention for his only son a sick lad. He was not short of money on the contrary he had a very good income from his playing, from his compositions and from his students. When Popper played in Vienna and his impresario came into his dressing-room the first question he asked was how much had been taken at the box-office. In one respect he was quite generous he let me hear his practising without charging me for it, and on the evenings he was playing at the opera he would let me use his free ticket. That meant quite a lot to me, because I was only a student at the time and not over-flush with money

Later on as a young doctor I had a welcome opportunity of extending my musical knowledge when I treated the music teacher Carl Agghàzy in his serious illness which caused him to be bed ridden, like Heine "imprisoned in a mattress vault Agghàzy's reputation was made with his six volume piano school which in some respects even outdid the popularity of Czerny's school At the conservatorium he taught the principles of composition, and he orchestrated many pieces without his name ever appearing Dvôrak may have played a similarly modest rôle towards Johannes Brahms, whom he assisted with the instrumentation In every respect Agghàzy was a modest and retiring character who lived only for his art and was little interested in reputation and fame

Hubay like Agghàzy was a student of the Brussels Conservatoire Hubay was a pupil of Vieuxtemps, whose successor he became. The daughter of Vieuxtemps married a Polish doctor named Landauer who adopted the French form Landouzy Landouzy was tubercular and he ascribed the longevity of tubercular Jews in North Africa not only to the favourable climate there, but also to the liberal consumption of garlic (in which, incidentally there may be more than a grain of truth) He therefore decided to found a garlic sanatorium in Tunis. He went there with his wife, her father Vieuxtemps and the latter's pupil Hubay who was also consumptive and was glad to kill two birds with one stone live with the master and at the same time treat his own sickness. Agghàzy who suffered from a spinal complaint also came to the sanatorium, and was responsible for the instrumentation of the compositions of Vieuxtemps and Hubay Incidentally the most beautiful

works of both of them derive from this period. Agghâzy's share remains in obscurity.

Unlike Agghâzy, Hubay loved the limelight. For a time he succeeded Vieuxtemps at the Brussels Academy but he soon returned to Hungary, where he became the national composer after Erkel's death, and the Director of the High School for Music. Amongst his best known pupils were Joseph Szigety and Franz von Vecsey. Hubay suffered from poor health all his life until his death a few years ago. He married the Countess Czebrian, who made herself responsible for seeing that the doctor's orders were as punctiliously fulfilled as possible, for the pair kept open house for the artistic world of Hungary. At exactly ten minutes to ten on evenings when they were entertaining the great double doors of the saloon would open and a liveried servant would advance towards his master with great dignity bearing a huge silver tray on which was one glass of water and a small envelope. The ceremony naturally aroused great interest amongst those not in the know, whereupon the Countess would let it be clearly known that the doctor had ordered the master to take his medicine ten minutes before retiring. The hint was invariably sufficient, and by ten o'clock peace reigned in the old aristocratic palace of the Czebrians.

I have always remained in close contact with the Hungarian music world and with the developing talents of each succeeding generation. Thanks to my close relations with the professorial collegium in Budapest, promising students who came to Berlin to finish their studies were always sent to me, and I am glad to say that I have often been able to lend a helping hand to those who needed it. I helped them into the saddle, so to speak, but they rode themselves—or fell off. In most professions there are compromises by which a man can keep his head above water or even win moderate success, but not in art. Art knows no compromises, and even the talented mediocrity is doomed to disappear sooner or later. Any talented young man out to conquer the world should humbly remember that there are perhaps half-a-dozen artists in the world who can fill the Albert Hall on their own reputation: Toscanini, Kreisler, Gigli, Menuhin and Tauber amongst them. Not many more. There are others who will in the future—but again not many.

Genius can show itself in the child, for there is no art in which talent manifests itself so early as in music. There was one youngster whose short career I followed at close hand from childhood to early death that was Ernst von Lengyel He was the seventh child of an unhappy marriage. When the parents finally separated, the husband left his wife with a seven year-old daughter and little Ernst, who was then two and a half. The household was a very modest one, and the mother made ends meet by giving piano lessons. At the same time she taught her own daughter Little Ernst was often in the room playing with his toys during these lessons. The mother would correct the daughter when she played a false note by calling out the right note, and one day when she was out of the room she heard her daughter play a false note only to be corrected immediately by little Ernst. At the age of five he played a Mozart piano concerto at the Queen's Hall conducted by Hans Richter That fact means a lot, for Hans Richter loathed infant prodigies, but he gave way humbly in the presence of a genius of Ernst von Lengyel's calibre, whose absolute sense of pitch was perfectly developed before he could talk properly

Ernst von Lengyel had a marvellous musical memory an even better one than Sir Thomas Beecham's which is almost photographic I think he could dictate Gibbon's "Decline and Fall of the Roman Empire" straight off. Ernst von Lengyel had only to read a partitur through once and he could then sit down at the piano and play it through. Unfortunately he was always ailing He suffered from a severe exudative diathese, and his public appearances had therefore to be reduced to a minimum. When he played to a circle of musical experts he required no notes. He could play any of the normal repertoire for hours on end without error He had no intellectual interests. In his free time he would go to church and pray or learn the railway guide off by heart as a recreation. He knew when every train left and when it arrived—that is to say when every train ought to leave and arrive. Not long ago I came across a somewhat similar case a very talented violinist who knew the tonnage of each ship on Lloyds Register and was at the same time a compendium of erudite information on yacht-building

Ernst von Lengyel died at the early age of nineteen years

from pulmonary tuberculosis I performed the autopsy In those days, unfortunately the Kaiser Wilhelm Institute for Cerebral Research did not exist. It was there, in Buch near Berlin, that Lenin s brain was cut into microscopic slices and examined. All I could find was that von Lengyel s frontal lobes were exceptionally developed particularly the left lobe whilst the cerebral ventricles were moderately extended

Music is regarded as a transcendental art, and apart from the almost arithmetical construction of the fugue form this is perhaps true. Every other art is more or less related to nature, but music lacks this natural parameter A painting of Praxiteles is said to have deceived the very birds of the air which attempted to peck at the fruits he had painted architecture can look like a rock the more sculpture approaches nature the greater it is poetry is greatest when it shows us the world at its truest (in naturalism) at its most beautiful (in fantastic poetry)—but always it is the world, *i.e.* nature, which is the basis. But music must live on itself. Nature has no analogy to the three chief attributes of music rhythm melody and harmony

Other arts produced great works of genius even thousands of years ago—the pyramids and the acropolis, the works of Praxiteles and Phydias, Euripides and Sophocles—but music as we know it to-day with its memorable works of genius is a very late comer Not that music as such is so very recent. The days of classic antiquity were not without music Amongst the Greeks it was represented by Orpheus and even by a God, Apollo The relation of music to architecture (Amphion built Thebes to the sound of the lyre) and to nature was no secret to the ancients. But whilst that is true, the music of those early classic days was not the music we know and love And the music of our day is perhaps no more than a beginning no more than the rudiments of what is still to come Its previous development went from the primitive melody to the classic form from the classic form to the subjective romantic. And to-day we have atonal music and that perhaps is nothing but an episode on the way Much of this development has taken place during my lifetime and I have been a keen and enthusiastic observer

Art, it is said is the most perfect form for the expression of

human emotion The form of expression naturally depends on the spirit of the age, and from that no artist no matter how transcendental his genius, can entirely free himself. This spirit of the time is ahead of the feelings and the understanding of the masses of the people. It lasts between twenty and thirty years before the masses have reached the place their leaders occupy and by that time those leaders are another twenty or thirty years ahead. I am discussing music here, but think for a moment of painting How amused if not angry was the general public at the beginning of the century with the work of the impressionists! And what clever jokes were cracked at their expense! And how long did it take before the cautious authorities were prepared to remove the works of Rodin from the Luxembourg to the Louvre? We are experiencing exactly the same phenomenon to-day with regard to music. By the time some of us had arrived at an appreciation of Richard Strauss, Debussy and Ravel, the main contingent had not yet struggled forward as far as Stravinsky Other contemporaries, like Schoenberg Prokofiev Krzenek, Schostakovitsch, Walton, and even Bartók, have had to fight hard for recognition. The main contingent is slow in recognizing anything strange because it is, so to speak, in another language, a language they have not yet learnt.

CHAPTER X

KREISLER HUBERMANN AND MENUHIN

PARISH DOCTOR in a poverty-stricken suburb of Vienna, Dr Kreisler found it no easy task to maintain the family he had brought with him from the north of Austria. Perhaps his success as a medical man was hindered to some extent by his passionate love for music and he certainly regarded his quartet evenings with his special friend Johannes Brahms and with Professor Billroth, one of the pioneers of modern surgery as much more important, or at least, much more interesting than the dismal nights in the labour ward Brahms was the centre of the flourishing musical life of Vienna which meant so much to Dr Kreisler Above all, he longed to have children with whom he

could one day play have his own quartet, for instance. It was undoubtedly with this ardent desire in his mind that his children, Fritz, Ella and Hugo were conceived

Is there such a thing as the conscious influencing of conception? Even at the risk of being dubbed a mystic, which is usually considered an insult for a serious scientist, I will confess that I am inclined to believe in the possibility of a psychic influencing of the unborn child at conception. To quote only one practical instance which goes to support such a view the wicked cuckoo is able by taking what must be the equivalent of thought to produce eggs camouflaged to tone into the nest of the unwilling and unconscious foster parents, who would otherwise eject the intruding egg indignantly

Conception is a purposeful phenomenon as far as nature is concerned. And when over and above that it aims at influencing the later make up of its fruit this will may well take on living flesh—up to a point No truth is absolute, and neither is this. However it strikes me as noteworthy that generally speaking illegitimate children (usually unwanted) play no very distinguished rôle in the world Here too of course, there are exceptions the great Boccaccio for instance, was the son of a French merchant and an Italian light of love, and Schopenhauer s great predecessor the French epigrammatic philosopher Chamfort, was the son of an unmarried governess, father unknown. The bastard in Shakespeare is something of a villain, but he is usually a highly intelligent, capable and all in all, a rather attractive personality goaded by fierce ambition, like Edmund in King Lear Shakespeare is obviously sympathetic with the bastard just as in a passing prick of conscience he sides with the Jew Shylock, but he sacrifices Edmund to the common notion just as in the end he abandons Shylock to the cold contempt of cruel mediocrities. Edmund the bastard appeals to his common humanity almost as Shylock does ("Hath not a Jew eyes? Hath not a Jew hands, organs dimensions, senses, affections, passions?") "Why bastard? Wherefore base? When my dimensions are as well compact, my mind as generous, and my shape as true as honest madam s issue? Why brand they us who in the lusty stealth of nature take more composition and fierce quality than doth with a dull, stale tired

bed go to the creating a whole tribe of fops, got tween asleep and wake?"

But there is a point usually overlooked in the argument—namely that not all children born in holy wedlock are legitimate in their conception How often are such bastards of an illegitimate night of love safely born to their naughty mamas in the secure haven of their marriage and brought up with all the love and care rightly the due of the official scions of the house? That is a question no one can answer But for the investigator it must always be a point of great importance whether the influence at work in conception comes from a long-established emotional tendency or from an ephemeral mood—whether it is, in other words, chronic or acute.

It would take too long to discuss the question in all its aspects, but the fact most clear in the present case, the Kreisler family the ardent wish of the father bore fruit in both his sons, who each came into the world with exceptional musical ability Hugo Kreisler was no less brilliant as a cello player than was his brother Fritz as a violinist, but unfortunately he died early of nephritis. His was a care free, artistic nature of heaven-sent gaiety a product of musical genius, Vienna atmosphere and inborn Bohemianism. His plump, amiable face beamed good nature.

His brother Fritz was a strong healthy lad, and as far as I know he was never ill until he met with his unfortunate accident in New York. He was highly talented, and his talents revealed themselves very early His first public performance was given at the age of seven—I believe in Cracow—so that he too was a *infant prodigy He was patronized by the Austrian and Mecklenburg aristocracy* who provided the means for his training and sent him to Paris, where he was placed in the care of the Jesuits. He was baptized a Catholic and brought up in the faith of the One True Church. This led to the uninformed asserting that he could have stayed on in Germany after Hitler came to power if he had wanted to as he had not a drop of Jewish blood in his veins. As a cynical colleague remarked, he must in that case have been more anaemic than he looked.

His Jesuit education profoundly influenced his musical development as well as giving him a sound classical education.

Under its influence he studied the music of the traditional church choirs, and certainly many of his subsequent themes derive from Vivaldi, Scarlatti and others whose works he unearthed in his youth. He was much drawn to the music of the *seventeenth and eighteenth centuries*, and he even published many of his own original compositions under the names of various more or less obscure composers of that period, a fact which he revealed on his sixtieth birthday. Extremely irritated by having been deceived by his "Classical Manuscripts," the English newspapers in particular were very harsh in their condemnation of this really quite innocent subterfuge. Kreisler was anxious, and quite rightly, to play his own compositions, but it would have embarrassed him to see his own name frequently as composer on his own programmes. He is not a vain and limelight loving personality, and this simple trick helped *him out of a difficulty. He was just the opposite of a plagiarist.* He had not ploughed his field with the ox of a neighbour and called it his own; on the contrary, he had ploughed with his own ox and called it his neighbour's. No very serious offence surely? The indignation, I fear, was not so moral, but more the result of irritation at having been taken in.

The compositions themselves are classical pearls of violin notation, and that, after all, is what matters. Kreisler has no need to borrow musical ideas from other sources. He once showed me a drawerful of musical sketches, compositions and themes which needed working out. They had been jotted down summarily at the insistence of his wife Harriet. When I, too, tried to persuade him to develop one or two of the more striking ones at least, he shrugged his shoulders. "For me every theme is the result of some experience, love, alcohol, depression or catastrophe. It is always the reaction to some emotional mood. Once the mood has passed it can't be recaptured. It is strange to me then, no longer a part of my life, and therefore I can't take up its expression again. Perhaps others can. I can't." And that is true. Kreisler creates on inspiration, and that is the reason why everything he creates is fresh and natural, and made all of one piece.

He began to give concerts soon after the completion of his schooling. He was much helped in his youth certainly, but it

must not be thought that his fame came easily He had to work hard for it, fight for it. In fact to the shame of Europe it must be said that it was the United States which first recognized his genius, and it was only when he was being enthusiastically received there that Europe brought up the halting rear During the last fifty years or so half the civilized world has heard Kreisler He is a man who smiles frequently and infectiously and there is something of the happy gypsy in his appearance. His eyes are clear and lively His hair is black and bushy with a slight wave. His nose is broad, and his forehead slopes slightly backwards, whilst his chin juts forward a little, giving the head a rather primitive but fascinating shape. The expression of his face is extraordinarily attractive, and few people are uninfluenced by it. And as for women he is almost mobbed and persecuted by their adoration.

But on the concert platform his whole facial appearance and his air change. His face is as though transfigured, and the light hearted smile is gone. He stands there on the platform squarely his broad shoulders set, his head tilted back into his powerful neck, his eyes half closed and his brows raised In his left hand, swinging lightly between the second and third finger is his Guarneri and in his right is the bow There is no strain, no tension, no pose and no affectation as he waits for the moment to raise his violin and begin He is completely calm and relaxed, and supremely at his ease as he waits for the moment to release his energies, and his calmness is transferred to his public. It is the calm and complete confidence of one who is absolutely sure of himself and his capacities, and, in truth Kreisler has never disappointed his listeners. When he is playing he is all concentration and the only unnecessary gesture just visible to those who know is the rhythmic pouting movement of his closed lips, a movement which continues for a little while after his playing is finished, the while it takes him to recover from the trance into which he has lived and played himself

It is a remarkable experience to watch those racing fingers at close hand to observe how they go from *prestissimo furioso* to the most delicate *morendo* as though they were almost floating over the strings. Kreisler's hands are much like the type I have

already described, with stumpy fingers—and nails bitten down to the quick. And yet the secret of his genius does not lie in his finger technique, as remarkable as that undoubtedly is. In fact I think his contemporaries Kubelik or Vecsey may be even superior to him in this. No the secret lies in his bow With the bow he sings. There is never anything unbalanced or loose in his playing His heart is in it utterly and, above all he is more than musical he is a musician. Before he plays he sings the whole programme through. Not that he has a beautiful voice far from it, but there is something fascinating in his nasal tone. Fritz Kreisler sings through his nose and he strikes every note accurately whether the highest or the lowest. He tunes his voice as he tunes his violin, and when he has satisfied himself, then he goes on until he has the desired *legato* or *staccato* for his fingers and the harmony of the accompaniment in his brain.

On one occasion we were making a motor tour through Italy together and were in each other's company practically all the time. He was giving himself a complete rest, and he had not touched a musical instrument since we started not that Kreisler is one of those musicians who has to practise two or three hours every day "to keep my fingers supple" On the journey back to Berlin between Basle and Frankfort-on-Main, Kreisler borrowed my umbrella, put the handle under his chin and then went through the whole programme he proposed to play (and did play) a week later in the Albert Hall He sang the whole programme through, playing in make believe on my gamp, correcting himself from time to time until he had everything tone perfect—in his head. It was the only instrument" he touched in six weeks.

His absolute sense of pitch is infallible To know the speed the car was making he never had to look at the speedometer He could tell from the tone of engine the number of revolutions it was making and from that he could tell the speed unerringly On one occasion in a biological laboratory in the United States anopheles mosquitos infected with malaria had erroneously been put in with mosquitos of a different species Kreisler was able to superintend the disentangling of the species by the pitch of their whine in flight alone.

I remember travelling with him from New York to Philadelphia, a journey of about two hours, where he had to make a recording in the Victoria Studios. Franz Lehár had dedicated a serenade to him and to express his thanks Kreisler had arranged to make a recording of it. However he found the violin accompaniment impossible, and he spent the journey recomposing it by singing it through to himself. In Philadelphia we went to a second-rate hotel and took our meals in mediocre restaurants where there was no chance of his being recognized Few musicians and artists are as popular as Kreisler, and recognition means the danger of being mobbed, which he hates. In the peace of incognito his new accompaniment was put down on paper and the next day the recording took place in the studios without a hitch.

Kreisler loves all kinds of music, and where other performers are concerned he is a generous critic. Music of quality entrances him. I don t know anyone who enjoys music more—unless it is myself. At first rate concerts he listens as though hypnotized and he is not inclined to be harsh on any minor faults of tempo or phraseology which may occur Wagner is his favourite musician, and he is filled with a profound respect for the man s genius. He is lavish with his praise for the brilliant performances of his musical colleagues, and there is no trace of professional jealousy in his make-up But pure technical brilliance does not impress him he takes a mastery of technique for granted. For him technique is on a par with acrobatics it is not art. Art is supreme because it is the expression of feeling Its unique and hyper-sensual expression in gypsy music moves him perhaps more than anything else. Yehudi Menuhin was fourteen years old when he made his first appearance in Berlin, and Kreisler and I went to the concert together Asked afterwards to give his impressions, Kreisler declared "I feel rather sorry for the boy *He has missed all the joys of mastering his* art. The rest of us have all had to fight hard for what mastery we have attained for Menuhin mastery has been a gift from heaven."

He seldom speaks of his own art unless he is urged to. Like all great musicians, his genius is a gift, and he gives it to his *public as naturally as a stream flows into the sea. His perform-*

ances always convey an impression of ease and effortlessness, as though there was no such thing as a difficulty but, in fact, his performance varies, and he is the sternest critic of them all as far as his own playing is concerned Like all great artists he is dependent on his own mood, whatever it may be, and I have known him come off the platform leaving an audience raving with enthusiasm and declare irritably I played like a swine"

Once I asked him whether he had any impression of a concert more satisfying than any other and he replied, Yes I gave a concert in a rather unimportant town in China. I had to stand on a barrel as platform. The whole atmosphere struck a chord in me, and I suddenly felt it was my duty to give this Chinese public Beethoven at his most glorious. And I believe I did. For several minutes after I had finished playing not a soul in the hall moved or made a sound It was a sort of devotional silence That was the most successful concert I ever gave."

There were experiences on the other side of the account to remind the artist that although his head was often in clouds of glory his feet were firmly fixed on the solid ground One of his concerts was so packed that the doors had to be left open in order to permit crowds outside in the corridors to hear him play even though they could not see him. In the middle of a *pianissimo* piece, which perhaps was hardly audible in the corridors, he distinctly heard a penetrating voice inquiring innocently Is he playing the fiddle or the clarinet? It threw Kreisler completely out of his stride for the first and only time in his experience and he had to stop playing to go off the platform and laugh till his sides ached.

Another experience was when a concert which looked like being no more than a *succès d'estime* was carried to the heights of inspiration by a quite touching incident. Whilst Kreisler was in Italy Mussolini invited him to dinner at his villa, after which the guest was to play for the ruler of Italy There was no one present but the dictator Kreisler and his accompanist. Mussolini was himself an amateur of the violin and he wanted to enjoy Kreisler's playing alone. Kreisler played with his usual high sense of artistic responsibility but with no very great enthusiasm, and then he noticed that, as though moved by an afterthought, Mussolini rose from his seat, tiptoed to the door

and opened it, and then returned as noiselessly to his seat. At first Kreisler was at a loss to explain the incident, but then he realized that the door had been opened in order that Mussolini's old housekeeper could enjoy the playing as well. This example of simple human kindness in an unexpected quarter moved him to the enthusiasm which had previously been lacking and he played an inspired concert.

Kreisler is one of the few performers of genius who can play three hundred times a year before packed audiences and never turn a hair His honorarium for a first-class concert is hardly less than 2,000 dollars, so that his income from concerts alone is princely and then in addition comes a very large sum from his recordings. But his own compositions have often been thrown away as far as financial gain is concerned. 'Liebesleid' was sold by his brother Hugo behind his back for thirty marks to the Mainz publisher Schott, and most of his other famous works suffered a more or less similar fate. Kreisler is a great artist, but a poor business man—though he rather prides himself on his financial abilities. His most successful operetta, "Sissi" did not bring him in a penny piece—but it made the theatre directors rich.

Just as easily as Kreisler plays, so he composes. I have the original MS. of 'Liebesleid" in my possession. It has been written down as though it were a fair copy and there is only one correction in it. I have very often noticed that musicians have a far better hand than their colleagues of the pen. There are partiturs of Wagner that look at first glance as though they were copper-plate engravings. A great exception is, of course Beethoven. His MSS. are chaotic. In setting down his music he remained the great anarchist.

Fritz Kreisler is a philanthropist and a lover of peace. He suffered deeply during the first world war and when it was over he did his best to help heal its wounds as quickly as possible. His home town, Vienna, had much cause to be grateful for his efforts. He is more than a man born in Vienna, he is a born Viennese The cafés of Vienna are full of men who like light-hearted conversation as he does. But he doesn t care for deadly seriousness in discussion. He is more than a pacifist he is a quietist, always ready to sacrifice his own opinions—even

his passionate ones—for the sake of peace. He is not a weakling, merely a man devoted to peace and quiet, and it is ironic that he should have to spend the greater part of his life going from town to town and from country to country always in the eye of the public.

On those rare occasions when he can escape and be in the company he likes and do as he pleases, then the Bohemianism so marked in his brother Hugo comes out in Fritz. He lets himself go he laughs heartily he eats Sauerkraut with Knoedel or "Wuerstl mit Kren plays cards, gallantly kisses the hands of ladies, enjoys a good drop of wine, expresses his opinions on art—and even politics. In short, he lives as he would always live if he had his own way and were not constantly under the iron discipline imposed on the public figure. It is only in such rare circumstances that the unspoiled simple human qualities of Fritz Kreisler are given a chance to express themselves.

Kreisler is prepared to go a long way to maintain domestic peace. Domestic discipline is a favourable factor in his life because it imposes beneficial rules and regulations which he would probably never impose on himself. I am not thinking of his art here so much as of the gaming tables. Most musicians I have known have played cards almost as passionately as they have played their instruments. Gambling seems to belong to the natural history of the musician. At one time I used to wonder why the musical world always made Sils Maria its holiday headquarters, until one summer I went there myself and entered the Hotel Edelweiss. No world congress of music could have attracted more musicians than the glass-covered veranda of the Edelweiss where table after table was occupied by the Central European masters of the piano the violin and the score, all of them passionately engrossed in their hands. I should think that Richard Strauss holds the endurance record in card-playing His first question when he comes to a new town is not about the venue of his concert, but where he can get in his hand of Skat. Geheimrath Deutsch, who was always his host when he was in Berlin, invariably organized relief parties of players so that Strauss could play to his heart's content, which was always much longer than one set of players would willingly have obliged him.

But Kreisler has other interests besides music and card playing. For one thing he is a collector of rare books, and his knowledge of the byways of bibliography is considerable. He is also greatly interested in the mysteries of natural science, and he does his best in the time available to him to do quite a deal of study in that direction. He is very fond of children, and in many respects he is as helpless as they are—the younger ones. The man whose hands and fingers are so trained as to produce the finest nuances with the utmost certainty can hardly knock in a nail (and it is as well not to let him try), drive in a screw or pack a case. I remember him once after a concert trying to pack up his few things in a case amply large enough to take them, and being reduced to despair and outside assistance before the case could be packed and closed.

A man like that needs a wife to look after him, and Kreisler has a very efficient one. Her rôle is necessarily that of guardian angel. Kreisler is devoted to his angel, and philosophically accepts the guardianship. Harriet looks after his social obligations, ensures that he can enjoy his material possessions in peace, and sees to it that his household runs smoothly. To look after Fritz is her life, and she devotes it all to him. She signs all his contracts, and I have sometimes suspected that she signs his autographs too. She 'gives' his concerts; all he has to do is to mount the platform and play. She clears every difficulty out of his path, watches over his health, checks his weight according to the American custom, arranges his day for him and watches every step of the dreamer. From long experience she knows that it is better not to let him out of her sight for long, and if she did he would be uncomfortable. It is only whilst Harriet is within reach that Fritz feels quite secure.

It is clear that discipline, however benevolent, produces resistance sometimes. Kreisler is no different from any other man in that respect, but he is not fool enough to resist for long; he is too well aware of how salutary the discipline is. I have often felt that the more a man expends his energies in the struggle for life the more he needs domestic peace (even when his natural tendencies run counter to domesticity). In matrimonial warfare Fritz Kreisler is a conscientious objector and a highly successful husband. The most busy and successful men are often

under the rule of their wives once they pass into the domestic sphere. The hero of Strindberg's drama 'The Father' is a martinet before whom the serried ranks quail when he strides towards them, but at home it is he who quails before his wife's stern eye. It is certainly based on sound psychological knowledge. It is the weaklings and nobodies of this world who work off their frustrated will to power by playing the tyrant at home. It is such men, too who provide the main contingent of the stern fathers

Men, no less than women are peculiar animals. Sexually man is a mixture of love, obsession inertia and compassion, to which must be added his deep-seated hang to comfort and peace. Even when his love and his obsession have disappeared, the all-conquering inertia remains and is misnamed fidelity or the compassion which is then misnamed goodness of heart. Or there is still his sense of duty which proves sufficiently strong and this is then often placed rather hypocritically under the heading of a virtue. This is perhaps why a man can best free himself of an entanglement by getting married The brutal severance of a long-standing relationship is often possible only if the female partner brings up sufficient courage and determination to do it. Brutality is really not a typical characteristic of the male sex.

Such reflections arise in me as the result of a lifetime of observation of married couples and their intimacies Very probably an element of masochism enters into it, too Some men are not averse to being maltreated They rather like exposing themselves as objects of pity and sympathy Looked at from this standpoint, the contradiction between Strindberg's animosity towards women and the fact that he nevertheless married four times resolves itself quite simply The great pianist D Albert set up something of a record with nine wives Weingartner had five And von Possart certainly established a record by divorcing the same wife three times and marrying her four times, leaving the institution of marriage one up and no more to play

Kreisler's marriage in no way resembled the misfortunes of so many of his colleagues I have seen many happy marriages, but rarely a happier The lucky ones amongst the artists are

blessed with a partner who is their very excellent complement. No one dares to criticise an artist as ruthlessly as his wife dares, and there is no one to whom he pays more attention. Richard Strauss, for instance, never regards a work as quite finished and satisfactory until his wife Pauline has approved And at all the concerts of the great German bass, Leo Slezak, his wife always sat on an end seat by the centre gangway and when he had concluded an aria his first glance was towards her to see how he had done, and by a tried and trusted system of discreet sign language she communicated her criticism Only after that did he pay any attention to his public. Kreisler too, is a man who attaches great importance to his wife's verdict, and she is a critic whose musical judgment is very reliable.

I am very fond of motor touring, and I like in particular to go away with artists, and above all, with the Kreislers. An artist gives one a new angle on old things. I have often found that seen through the eyes of an artist a familiar thing took on entirely new aspects there were interesting details I had never noticed before. The analysis of a thing often changes its complexion, and even Jakob Burkhardt is seen to be far from the last word on the Renaissance. I was, for instance, deeply impressed by Kreisler's analysis of Giotto's squinting organist, and our visits to Florence and Padua, to the Cimabues and the towers of San Gmignano and the day we spent together in that out-of the way treasure house Volterra, the focal point of so many bygone cultures, are unforgettable memories for me.

A cherished memory too is Kreisler at the piano improvising He is a great artist and performer as a pianist as well as a violinist. I have seldom heard the piano played more beautifully His playing was so delicate that it seemed sometimes as though a breeze was ruffling the keys—but sometimes the breeze would swell rapidly into a storm Kreisler at the piano is so impressive that it seems a great pity that so few are privileged to hear him.

The international concert artist is rather like a hunted animal He rushes from town to town and from country to country and his home is just where his luggage happens to be parked But for those rare periods of freedom from engagements Kreisler established himself in a house in Grunewald a pleasant

suburb of Berlin Every room in the place was furnished with exquisite taste and with possessions of great artistry from all parts—Kreisler has made no less than three tours of the world Every cherished piece had its history and association As he is childless, Kreisler arranged to leave the house and its contents as a charitable foundation and I was appointed one of the trustees.

I quite understood and sympathized with his desire to save the place from the beastly claws of the Nazis, but his efforts could not always be approved entirely and the whole affair left rather a bad taste. Kreisler's friends and colleagues were dismayed, and with some justification, at his frantic and undignified efforts to be allowed to remain on in Germany after Hitler came to power Both Toscanini and Hubermann publicly warned him but for once some demon robbed him of his highest possession his keen sense of hearing In the end he had to go and then he deeply regretted his vain efforts to come to an arrangement with the devil. Before the Nazis came to power he had agreed with the republican authorities to pay a settled sum in taxation to make it possible for him to live in Germany and not be crushed by the burden of double and treble taxation. When the Nazis came they refused to recognize the arrangement and charged him with fraudulent tax manipulations. Under this perfidious charge they robbed him of everything he possessed in Germany

Bronislav Hubermann, as great an artist as Kreisler but politically far more astute saw the threatening catastrophe in Germany long before Kreisler did, and he turned his back on the shameful place with deep contempt and loathing He went back to the land of his ancestors and continued his musical career there, founding the magnificent Philharmonic Orchestra of Palestine Hubermann's nature is outwardly a little abrupt and uncompromising but inwardly he is a mild and contemplative character In appearance he is no darling of the concert hall. He is rather undersized and his forehead is unusually developed so that it seems to make up a good half of his face. His chin is prominent and his lips are rather thin, but it is a powerful head, and when he plays, his eyes are restless (one has the feeling that as a child he kept one eye on his violin and

the other on his music) and his expression is impressive in its determined concentration reminiscent of the death-mask of Beethoven.

Hubermann was an infant prodigy too There is a well known picture of Johannes Brahms conducting his orchestra. On the platform beside him is little Bronislav Hubermann, his violin tucked under his chin. It was as soloist in Brahm's famous violin concerto that Hubermann made his first appearance before the public. He was a great violinist, and, he, too, toured the world. He was one of the leading concert hall artists, and his brilliance was recognized, but he was not popular He had a loyal following in this or that town, or this or that country but he never conquered the world as Kreisler and others have done. His art lacked all intimacy it was as stern as his character and austerely classic. And although his art was recognized and admired and his personality respected, he was not loved.

Off the platform Hubermann is a bundle of *nerves* and fancies. He lives in constant fear for his health and in positive terror that something might happen to his hands Unfortunately his air accident in the Dutch East Indies before the war made him worse and his nervous anxiety still greater He cannot walk up a flight of steps unless there is a banister on which he can lean—or rather could lean if he wanted to, because in fact he never does use the banisters but they must be there. He will not play for instance, unless his notes are on a stand before him but, in fact, he never uses them—but they must be there. Above all, he suffers from chronic insomnia In hotels and in private houses he is always anxious to find the quietest and most out-of-the-way corner to retire to He had a flat in a *house on the Luetzow Ufer in Berlin. He complained that the* family in the flat above him were noisy Whether they really were or not I don t know but in order to deaden the sound of their movements he approached the father of the family and offered him a generous sum for the purchase of thick carpets to cover the whole floor space of their flat. The sum of course, was gladly accepted, and Hubermann had cause for satisfaction, for the situation greatly improved. A little while afterwards Hubermann met the man on the stairway of the house and

was overwhelmed with thanks and gratitude. It appeared that Hubermann's unexpected gift of money had been providential in the family fortunes of his allegedly noisy neighbours.

"Herr Hubermann," the man beamed. "I don't know how to thank you sufficiently. You saved me from bankruptcy and ruin."

"How?" asked the puzzled violinist. "Didn't you buy the carpets, then?"

"No," replied the good neighbour jovially, "carpet slippers."

Those were the days when Hubermann could still laugh heartily and he did. I have not seem him for a long time and friends tell me that they no longer see him laugh. Apart from the terrible disappointment he suffered in Germany there was a tragedy in his private life from which he never recovered. He was deeply in love with a very beautiful woman. His love was reciprocated and the relationship meant everything to him and to her. They were in Paris together and she went ahead to London to prepare things for his coming and was immediately struck down by an epidemic of influenza which was then rampant. It developed at once into pneumonia, and she died within a few days. Although Hubermann rushed to London as soon as he learned that she was ill, she was dead when he arrived.

Hubermann's young colleague, Yehudi Menuhin, is now twenty-seven years old. I first heard him in Berlin when he was fourteen and I have recorded the deeply moved comment of Fritz Kreisler on his playing. There is little I can say about his art: it represents the acme of perfection, the culmination of a long development of violin art and technique. "Poor lad!" said Kreisler—"his poverty looks very much like what the rest of us regard as untold and unimagined wealth. The Gods have set the sweat of his face between man and the attainment of the beautiful, say the Greeks. In our Christian days it is often said that God gives to those he loves in their sleep. The latter is the easier way."

Yehudi Menuhin was born in New York, but he is only one generation removed from Europe's most thorough-going east, the neighbourhood I have often referred to, a plague spot for some, but a source of great intellectual and artistic wealth,

where proletarian aristocrats of art and intellect dwell in the half light until the time comes for them to go out into the world and conquer their birthright. An over-curious and indiscreet society lady once asked Menuhin's father if he had any idea where the lad got his talent from. The old man looked at the lady quizzically and then declared "From King David, ma am"

CHAPTER XI

TOSCANINI FURTWAENGLER RICHARD STRAUSS BRUNO WALTER FRITZ BUSCH

I FIRST MET Toscanini in Dresden Fritz Busch had produced "Don Giovanni" in an entirely new *mise en scène* and my friend Max Slevogt had done the scenery It was altogether a notable performance, and both Busch and Slevogt gathered new laurels. Toscanini had come specially to Dresden to be present at the First Night, together with his daughter and her husband, Count Castelbarco. After the performance we were all the guests of Count Seebach, the intendant of the Dresden Opera House, a grey haired old gentleman of fine artistic perception. The conversation concerned the performance almost to the exclusion of everything else. It was analysed in all its components the music, the singing the acting the scenery the costumes, the production—nothing passed without close examination and discussion. In the end there was general agreement on the verdict *it was a most remarkable performance.*

However on one point Toscanini and Busch had to agree to differ for the time being Busch had taken it upon himself to alter one note at the conclusion of the second act. Toscanini was not prepared to let this sacrilege pass. Mozart was Mozart, and Fritz Busch should not have dared to make the change Busch defended himself He declared that the note as it stood in the printed score was obviously wrong It must be a mistake because as it stood it was out of keeping, not in Mozart's style at all. It jarred. In short, it was wrong There must have been a printer's error Toscanini was not satisfied and the very next day he went to Vienna, where his first step was to visit the

Albertinum, where on examining the original MS., he discovered that Fritz Busch was right. The reproduction had gone out with a printer's error. The alteration made by Fritz Busch had, in fact, restored the reading of Mozart's original.

It was a highly interesting clash. On the one hand Toscanini with his enormous reverence for the very letter of Mozart's MS. (as he thought) and on the other the keen instinct of Fritz Busch for the spirit of the music. Clearly instinct was right (it happened to be the instinct of a man who was himself a master) but in a thousand and one other cases instinct might easily go astray. It almost certainly would go astray in the case of lesser musicians, and therefore the utmost care should be taken when anomalies or apparent anomalies arise in the text. There is an enormous difference between the attitude of a master of tremendous conscientiousness like Toscanini who prefers when in doubt to stick to the MS. and the attitude of a man like Wagner, himself a genius, who stuck to the MS. out of sheer indolence. More than half a century ago the famous musical historian Ambros (who despised Wagner) demonstrated that as a conductor Wagner included in all his renderings of a particular piece of Beethoven a hoary old printer's error and that not from any reverence for Beethoven but out of sheer intellectual laziness.

I met Toscanini again in Salzburg. It was at this time that he suffered his first attack of homarthritis. It was a severe handicap for a man of his temperament who conducts not only with his brain but with his whole body, who seems actually to be physically compelling the orchestra to do his will. At Salzburg he had to conduct with his arm half paralysed, and it was not merely a question of conducting one finished performance: the music of Verdi's "Falstaff" had to be studied afresh. His trouble was harmless enough but very painful, and the work proved extraordinarily arduous for him. However he surmounted his difficulties by sheer indomitable will, and the performance was a triumph. Afterwards Reinhardt gave a banquet for Toscanini. My wife was sitting next to the great Italian, and, of course, the performance arose in the discussion. My wife modestly confessed that although she loved music and had a deep feeling for it, she had very little technical under-

standing Toscanini was delighted and clapped his hands in his temperamental way declaring that he was overjoyed to meet an unprejudiced critic. He thought more of the courage which admitted the limits of musical understanding than the pretended knowledge of pseudo-intellectuals And, of course, he was right. A real feeling for music need not be based on technical understanding, any more than the theatrical critic need master the technical details of production.

One of my most valuable musical experiences was when Stefan Zweig and I were invited by Toscanini to be present at his rehearsals of a cycle of Beethoven symphonies he was to conduct in London. It was concentrated spirit of Beethoven, and we were privileged to watch the concentration being achieved. Toscanini put a simply tremendous amount of energy into the rehearsals. First he would conduct a passage with explanations then he would conduct it again to the accompaniment of prayers and entreaties. If it did not go then exactly as he wanted his baton would fly off at a tangent, his fingers would run through his hair in wild despair and his face would then be buried in his hands whilst he recovered from his disappointment. All was lost, and words failed him. Then he would recover courage and start again This time it would go better The musicians would follow him, doing their utmost to please him. At last it would go with a swing and a transfigured Toscanini would conduct as though in the seventh heaven singing the music as he conducted and occasionally calling out instructions to various instruments.

There it was, the reward of tremendous effort, and the mighty harmonies would thrill through the empty hall. It was achieved the seventy-year-old master had exerted his will and triumphed again. Friends have told me that at home, conducting the orchestra of the Milan Scala, he lets himself go even at the performance itself makes the most furious grimaces and hurls audible rebukes into his orchestra. There are not many conductors from whom the B.B.C. Symphony Orchestra, of which each man is a soloist in his own line, would stand what it willingly stands from Toscanini but, there, Toscanini is a master of his art, and they know it, and are even grateful to him for his bullying

It is always a matter of interest to me whether any hereditary indications can be found to explain the presence of genius. I asked Toscanini whether there were any such obvious indications in his case and he told me that his father a glass-blower in Modena had been very fond of music On Sunday afternoons and on other holidays he would sing with his children in chorus That was all the musical training Toscanini had as a child When he went out into the world it was as a musician that he earned his living and at the age of nineteen he found himself a member of an orchestra with engagements in South America. Owing to the sudden illness of their conductor in Buenos Ayres he was chosen to conduct. It was the first time in his life. Whatever the public may have thought about it, his orchestra was delighted It was his first success, and it was decisive for his future he could manage orchestras.

Fifty years later he was world famous, and English friends were anxious to celebrate this fiftieth anniversary by a gala concert in the Albert Hall. Now the acoustics of the Albert Hall are notoriously bad (though everything possible has been done to improve them) and Toscanini refused absolutely to conduct in the place and nothing his pleading friends could say succeeded in moving him. He was just as determined when he decided to have no truck whatever with Mussolini. Both these incidents (and many others) bear witness to a noble and determined character

Not all great conductors are men of noble character I am thinking here of Furtwaengler a man who failed to live up to his own frequently expressed convictions, and let himself be used, and his world prestige exploited, in the interests of a foul cause. It was not that he knew no better or was in any doubt, for he assured me on many occasions that he felt the same contempt for the Nazis as we all did. His whole past, he declared vouched for his abhorrence of their baseness. To ally himself with such scum would mean to betray his best friends—for instance, Therese Simon the owner of the *Frankfurter Zeitung* and her circle of music loving Jews. The title of State Councillor had been forced on him by the Nazis he conducted very rarely in Germany they had ten…
deprived him of his passport they had ascribed wireless…

casts to him which he had never delivered—and so on and so on But that was as far as he got. He could mouth excuses for himself one after the other but he couldn't or wouldn't summon up sufficient civic and moral courage to break with this new Germany of shame and disgrace. And the reason was that he was afraid to face the possible rigours of exile. He was afraid he would find himself without engagements abroad, and he was not prepared to take the small risk involved In reality there was none. He is a great conductor and in exile he would have increased his reputation and, in addition, won the added respect of all honest men. The man's character was not strong enough He was my friend I liked him the thought that he would damn himself with the civilized world left me no peace, and I did everything possible to make him see where his plain duty—and even his real interest—lay and towards the end of 1937 I wrote him a long letter setting out the whole position and imploring him to take the step which would place him with us, where I thought he belonged, and against the Nazis. It was no use.

With the best will in the world I can find no excuse for him. He is a six footer the engaging son of a Professor physically upright but spiritually withered. In his profession he is energetic in civil life he is a weakling As a musician he is a master a vigorous crescendo as a human being he is a miserable, feeble *smorzando* The undisputed master of an orchestra, he let himself be mastered by the Nazis. No excuse? Well, as a medical man I know he suffers from stomach trouble, and it is a well-known fact that chronic stomach trouble has a deleterious effect on the character Farther than that I cannot go and I feel greatly disinclined to advocate sending all the Nazi aiders and abettors to Karlsbad.

Bruno Walter is a very different character The expression on his face is gentle, almost childlike, and his mouth is friendly One almost feels that his appearance alone is a sure sign of how well he conducts Haydn and Mozart. To-day he is the undisputed master of Mozart interpreters, and at the same time, as the pupil of Gustav Mahler he is more fitted than any other to interpret the latter's works, whilst the works of Hugo Wolff take on an added loveliness when he conducts them.

It was Gustav Mahler whose persistence and determination made the Vienna Opera House one of the great centres of world operatic music Something more than musical understanding was necessary for that, and Gustav Mahler possessed it theatrical blood The problem of the real significance of opera is still the centre of great argument. Some declare that the opera is drama with a musical background others insist that it is music against a dramatic background. Toscanini favours the second interpretation. For him the singer is a member of the orchestra, and no more. Music sung has to take its place in the framework of music as a whole, for all the world as though it were a violin—or a bass-bombardon And Toscanini therefore treats his singers in the same orchestral way as he treats his cellos or his triangle And he changes them as he would change instruments, as non human objects. His short interjection at a rehearsal Un altro tenore is an expression of this attitude. Sometimes he demands performances of a singer—*i.e.*, for him an instrument like any other—which are more suited to a constructed instrument than to the human organism. I remember once hearing the stretta in "Troubador taken by him *presto* at a speed which exhausted both singer (the well-known tenor Lauri Volpi) and audience (including me) Just from listening my ribs hurt said Nestroy on one occasion it was true of this. It was a new and extraordinary experience, and one couldn t help being carried away by it, but I believe Verdi must have turned over and over in his grave—perhaps in time to it In any case Toscanini sets up the principle the opera is music, pure music. Bruno Walter takes the other view For him the opera is theatre the singers are actors, and the orchestra is an accompanying factor subordinate to both action and singing

There are the two opposing theses. In the last resort the question is can the opera stand up to the demands of our time or will it go under? Well the opera has been with us now for two hundred years and more and it has not gone under yet it has remained pure opera even when (under Wagner) it was called a music drama. That is to say it has remained an impossible art form impossible, you would say and unnatural, something monstrous in its essence. And yet it continues to exist brilliantly as though in justification of the

Hegelian maxim that anything which exists has the right to exist. To-day the objections to the operatic form are concentrated chiefly against ridiculous libretti. Weber's libretti are purgatives, and no investigator no matter how painstaking, has yet been able to discover exactly what does happen in "Troubadour" and, above all, why Schikaneder's "Magic Flute" is sheer cretinism. But, on the other hand, 'Traviata (Dumas Fils) and 'Rigoletto (Victor Hugo) are masterpieces of musical drama. The libretto of the delightful "Figaro is based on Beaumarchais, whilst the libretto of 'Don Juan" with its brilliant combination of tragedy humour and moderate goose flesh, is surely a supreme example of dramatic operatic art. The three or four acts of "Tales of Hoffmann" are a little woolly and disconnected but set to music the whole has a compelling magic. And then 'Fidelio" has a just acceptable text. So what is going to become of opera? Exactly what has already become of the opera despite the opera the inadequate has nevertheless become an event —it became so two hundred years ago, and it has remained so ever since. There is little reason to fear that an opera will ever cease to be an event.

I appreciate the opera as I would appreciate a row of good pearls on a bad string It is beautiful on the bosom of a beautiful woman, and it gives pleasure round the neck of a dignified old lady If a libretto packed full of unintelligent and idiotic anomalies and commonplaces can nevertheless inspire a great musician to compose immortal music for it, then I am prepared to ignore the string and feast my eyes on the pearls. But that I admit, is making the best of a bad job, and there is no reason whatever why the experts should not do their best to diminish the improbabilities of the genre and to make the unbelievable credible if they can (on the contrary they must try) Sometimes they do it by drawing the attention away from the idiocies and improbabilities, by making the whole more brilliant in cunning combination with the attendant arts, by condensing the text, by unobtrusively polishing up the duller parts, by clever adaptation—in short, by the art of theatrical production. In this the great master was Gustav Mahler and his most brilliant apprentice now become master in his own right, was Bruno Walter the contemporary master pioneer in the

reform of the opera. What he has done in this respect in both Berlin and Vienna remains exemplary

After him as ingenious reformers of the opera come the two friends and partners Fritz Busch and Carl Ebert. They have done wonders with Mozart and with the early Verdi's Macbeth at Glyndebourne It is heartening to observe the way in which these two Busch the musician and Ebert the actor from the Prussian State theatre—complement each other in their work a great contribution to the future of the opera. It is along such lines that the opera must be revised against its own traditions On the dramatic stage such a revision was just as necessary and it was brought about by a handful of international playwrights and brilliant producers The same I am convinced will be done with the opera The most daring if not the most successful experiment was Milhaud's "Columbus" with the text of Claudel Excess was the trouble here and it is typical of Bruno Walter's well balanced work that it knows no excess. He counters the hoary old abuses of the operatic form and seeks to develop it to perfection. And in this he is supreme.

In composing his Rosenkavalier Richard Strauss went so far as to include the stage directions in the music—for instance, through which door the servant was to make his entrance and exit The incident gave rise to much discussion. I don t much care for the custom of the analytical historian the picking out of symptoms and the setting up of cast-iron conclusions on their basis concerning character etc. Such conclusions are non-proven they may be right—and they may just as well be wrong I have heard two interpretations of Strauss's remarkable *gaffe* This is more or less the high-brow explanation "It is clear with atomic certainty that the composer subconsciously overcome by musical hybris, forced the essential essence of the opera from him by means of repression withdrew his ego in pathless deviation from the real object of the artistic form and subjected his monomania abjectedly to a thing which in its original idea carried validity only for the producer or scene-shifter " I have also heard it explained in a rather simpler fashion by a Bavarian innocent who declared Well, God help us, there you see was Strauss composing away for all he was worth, and it was going fine, and he came to that bit and

he didn't want to stop so he said to himself, well it's all one wash up, so let's put the servant to music too and then there needn't be any pause." Personally knowing Strauss as I do, I favour the second interpretation.

The key to Strauss's private character reads ostensible child of nature—with a very generous dose of calculated effect. Part of this calculation is deliberate, and goes on, so to speak, on the first floor and in the light of day the rest of it is in the cellar gloom. Strauss has been guilty of many acts of odious characterlessness, though he professes to find them neither odious nor characterless He doesn't want to believe it himself, and he succeeds He never regrets anything A breach of loyalty when the circumstances seem to call for it is so natural to him that he is highly astounded at any suggestion that a breach of loyalty can never be called for in a man of character His astonishment is half honest, and that is perhaps the worst of it.

I have already mentioned that he was as thick as thieves with the richest Jews in the country When the circumstances seemed to call for it he left them in the lurch remorselessly Money has always meant a lot to him—far too much. In other days he married off his son to a daughter of Israel who was loaded with it. His grandchild is thus half Jewish. He personally dedicated one of his operas to a Willi Levin a very rich 'ready-made Jew as Streicher was fond of calling the Jews of the Montagu Burton type. Most of his collaborators were Jews or half Jews, like Hoffmannsthal Stefan Zweig and Alfred Kerr And after all that, when the Nazis brutally dismissed Bruno Walter just before he was due to conduct a concert of Strauss's works the noble Richard Strauss instead of showing solidarity with the humiliated conductor (not that the Nazis really had the power to humiliate a great artist like Bruno Walter) sprang into the breach—to save his concert by conducting it himself though he is said to have done it without taking the honorarium. Perhaps I was wrong in saying he never regretted anything.

I was with him once at the Lido in Venice. It was the inflation period, and, as everyone knows, the fact that half a-dollar was enough to pay for the royal entertainment of a dozen

people attracted a public which could suddenly afford to be purse proud Most of them there were an uncultured pack of inferior snobs and no one suffered more from their clumsy and offensive behaviour than Americans of Elsa Maxwell's type. Richard Strauss was highly indignant at their behaviour and turning to me he declared savagely This mob hasn't as many cultural monuments between New York and San Francisco as we have between Augsburg and Munich—and to-day it dominates Europe. From that he went on to politics. He deplored the fact that the Central Powers had lost the war bewailed the collapse of the Bavarian monarchy expressed the deepest sympathy with the dismissed royalties and cursed the German revolution up hill and down dale The essential failure of this very unrevolutionary revolution was that it did not go far enough that it hesitated at the very threshold of its obvious tasks and perished of its own lack of consequence But for Richard Strauss it went too far

I tried to explain to him that what had happened in Germany was only a small part of the general process of change which was going on in the world as a whole and affecting both political and unpolitical spheres that analogies could be found on the artistic field in painting the Barbizon school in science the epoch making advances of Pasteur and Mendeljeff in sculpture Rodin in engineering technique Diesel, and so on And I added that the process was going on just as much in music there was a man, for instance, who had invested programmatic music with new harmonies, a musical socialist, even a bolshevist revolutionary and his name was Richard Strauss. He listened thoughtfully to what I had to say and seemed even a little embarrassed and finally he pulled himself together You know Herr Professor you may be right. I have been a bit daring and I got rid of a lot of old junk. But I still stand on the shoulders of Beethoven and Wagner Call me a revolutionary if you like, but not a Bolshevist. The Bolshevist is Stravinsky"

In defence of himself perhaps he was right He was less a revolutionary beginning than the end of the Wagner and Liszt period whereas Stravinsky is a deliberate, systematic and determined, even professional revolutionary in music. Inci-

dentally, Strauss himself had expressed deep admiration of Stravinsky's 'Petruschka'." So much for Strauss. It is un necessary to say that his character does not reflect on the greatness of his musical performance. It is unfortunate that high moral standards are so often independent of great ability—or rather the other way round. However it is not always so: there are shining examples of the two in one, but not Richard Strauss.

Whilst we are on the subject of conductors, let me introduce another one, although he didn't last very long. Whilst I was serving my time as a young student of medicine in the Austro-Hungarian Army we all marched off to Piliscsaba near Budapest for the summer manoeuvres. We were brigaded with the Bosnian-Herzegovinian Regiment. My regimental doctor was the ranking chief, and he was responsible for the medical service in the camp. However he did not take manoeuvres very seriously, and there were so many things he did for preference that although I was only in my sixth term, he left the regular visiting and the treatment of minor cases in my hands. Our chief amusement was provided by the regimental band of the Bosnians, which was the most famous of all the military bands of the monarchy, and rightly too: its conductor was a young bandmaster named Franz Lehár. The revenue from the band and it was a large one went to the officers' mess. Needless to say the band was treated like the rare jewel it was. The bandsmen were hardly more than courtesy soldiers, and except for formal occasions the band was divided up into groups and hired out to various restaurants and cafés, from which practice much grist came to the mill. Lehár would tour the various restaurants and cafés, conduct a piece or two in each, receive his applause and then go on.

One day two of these highly prized bandsmen reported sick to me. I examined them and suffered a terrible shock. They both had diphtheria. I called in my regimental doctor and we discussed the matter anxiously. If the infection became known it meant quarantine for the whole band, and that would have meant a grave pecuniary loss. In the end we decided that the best thing to do would be to record two cases of inflammation of the throat and hope for the best. We isolated them and treated them as best we could. There was no 'diphtheria

serum in those benighted days and the treatment was entirely symptomatic I was in charge of them and I can assure you that no two musicians ever had such care and attention. To ensure complete isolation I was given special guards enough men to have manned a small fortress. In the end the two recovered and there were no further cases of infection. And all the time the regimental band played on cheerfully

Lehár knew of course we had had to take him into our confidence When it was all over he was anxious to show his gratitude in some way and he asked me whether there was anything he could do for me I acquainted him with a wish I had long secretly cherished would he let me conduct the band once? Why certainly he would and arrangements were made for me to conduct the Semiramides overture of Rossini the following Sunday morning before the whole camp on parade. When the great moment came I was in a terrible state, a compound of great pride dour determination and funk. I won t say I don t know how I got through, because I do now though I didn t at the time. I am sure all the musicians were very sorry for me and did their best I was much annoyed with the big drummer "The Backside Conductor" as he is dubbed, who walloped his instrument mercilessly and far too loud Afterwards I discovered that the noble fellow was beating time to prevent the whole performance from falling to pieces. I know what Napoleon felt after Waterloo I had no idea an overture could take so long When the fiasco was at last at an end I put down the baton with relief. I was physically exhausted. Up to then I had been quite undecided which career to pursue music or medicine My decision was made for me, and since then I have never wavered

CHAPTER XII

SINGERS AND THEIR ART

SINGING IS A means by which a human being can express the state of his feelings. The psychical condition "tunes the instrument. Musical analogies often serve to describe a state of

mind or a condition of the spirits a man is "tuned up" or "toned down", or "out of tune" with the world. A man is said to have a "harmonious" nature. Life is said, in its more depressing moments, to be "full of disharmonies". A man's feelings can often be discovered from the tone of his voice, from its high or low pitch. And conversely it is a fact well known to practical psychologists that a man can deliberately alter his mood by altering the tone of his voice, though it requires quite an expenditure of energy to do so. For instance, real physical effort is necessary to raise the pitch of the voice by as little as the third of a tone in opposition to a prevailing mood. And again nothing is more calculated to soothe hypomaniacs than to talk to them in low and quiet tones, and thus persuade them by a psycho-physical reaction to lower their own tone. No prayer, no matter how deeply devotional, can express the spirit of a burial more adequately than Chopin's funeral march with its preliminary deep and solemn passages which stress the sad loss of a beloved person, and then its higher pitched and consoling passages with their soothing idea that the dead person has now found peace.

In short, the voice is an integral function of man's physical and psychical condition. I don't suppose there is anyone left to-day who would anatomically confine the voice to the larynx. The larynx is like the strings of a violin which sound only when they are vibrated on a sounding-board. But although this physical phenomenon is quite simple and can be adequately analysed, it is still quite impossible to explain the fine nuances on which the tonal quality depends. For instance, no one has succeeded in explaining satisfactorily just what it is, or what combination it is, which makes up the fine tone of one violin as distinct from another. The exact proportions, the size, the material used in the making, the varnish, and so on—everything has been examined, but the solution still evades the investigators. The hope of finding an analogical explanation in the case of the human voice is probably still remoter.

What we do know is that physically three main factors are at work to produce the phenomenon of the human voice: the lungs, the larynx and the tone-modulating apparatus. When the lungs send the air uniformly through the larynx, then the

tone will be high or low according to the tension placed on the vocal chords. The tone is formed by the sounding board of the chest the auxiliary cavities and the modulating influence of the mouth etc. Where these three composite parts are uniformly developed then the resultant sound will be agreeable and possess artistic qualities. Added to this there is the factor of pure musical feeling which gives the tone its expression. How seldom nature gives all these attributes in full measure to any one individual can be judged by the fact that there are hardly ever even two great singers of equal reputation living at the same time And even then both a Caruso and a Chaliapine will each be called "unique Since their day no new star of equal quality has risen. We have been waiting forty years for a new Patti

The basic qualities of a voice are born and teaching and training can never be anything but auxiliary aids they can never replace or make up for an inborn lack. The teaching of singing and the training of singers give rise to much dispute. Every teacher of singing has his own pet ideas, and very often he rides them to death—and destruction ignoring the inborn qualities of the pupil and ruthlessly imposing a regime which has perhaps proved advantageous for some famous singer with very likely quite different constitutional material. I have known many teachers of singing personally and have heard about many others through their pupils. They all lived on their own former reputation as singers and on the reputation of such of their pupils who had proved successful—that is to say generally of pupils with constitutional material similar to their own, who were therefore able to derive benefit from their particular methods. With pupils of a different constitutional make-up such rule-of thumb methods can prove disastrous, but then the failure is not ascribed to the unsuitable methods, but to the alleged inability of the pupil, and nothing more is heard about the matter On the other hand when a pupil meets with success—or fame!—he is paraded around as having been "made' 'brought out' or whatever the favourite expression may be, by the teacher

In my experience no artists are more credulous, even gullible, than singers. The devotion, loyalty love, gratitude and

confidence of a successful singer towards his teacher have to be seen to be believed It is quite moving—and quite foolish. A high-pitched vocal register is often said to be intimately associated with the intellectual condition we call stupidity and to befall coloratura singers and tenors in particular The friends of the famous singer Joseph Schwarz were accustomed to declare that although he was a deep baritone, he was as stupid as a high tenor But to return to my point, for a teacher of singing to apply the same methods to all his pupils is sheer folly but that does not prevent its being done more often than not, and often with tragic results for the unfortunate pupil whose constitutional make up is not susceptible to such methods. The wretched pupil begins to doubt himself in despair instead of recognizing his teacher for what he is, a man of neither sense nor understanding Teachers of singing are generally either too lazy to check, re-check and revise their methods or and that is usually the case, too dull to understand the absolute necessity of individual adaptation. Most of them concentrate on a so-called 'breathing technique and usually insist on something they describe as a *point d'appui* on which the regular and uniform expulsion of the breath is supposed to be based Some of them swear by the fixation of the diaphragm, others will have nothing but rib breathing a third contingent insist on stomachic muscular breathing, a fourth lot have discovered that the rump muscles are really the queen of the air and so on and so on, including those who make everything dependent on the relaxation of the bodily stance and the thorax, those who pay chief attention to the innervation of the vocal chords and the movements of the mouth And finally there are those who go all out to "breathe soul" into their pupils. Very few of them seem to have the faintest idea that even the simplest muscular movement is the result of a complex co-ordinative function, whereby all that is seen is the practical intention of the co-ordinated or reflex effort. The great majority of them seem to imagine that the human organism is made up of simple individual functions instead of complex co-ordinative functions.

To give an example of what I mean, when a human being sighs or yawns, such an improbable part of the body as the anus

is drawn into the process, for the anal sphincter is contracted and the whole rectum is convulsively drawn up and that is not all, for other muscles are brought into operation as well. I knew a successful teacher of singing the tenor and medical man Nadolovitch, who secured a regular change of register and particularly high tones, simply by variable innervations of the buttock and the abdominal muscles. And there are, in fact, various schools which found their systems on some such concomitant movements To define training in the wider sense I should say that no matter what the physical movement to be carried out the process is not the learning of the movement itself—you cannot learn to use a muscle—but the exclusion of all inhibiting accompanying functions. In other words the true aim of training is to obtain a relaxation of all the muscles not necessary to the movement, whatever it may be. The energy saved in this way then benefits those fewer muscles whose true task it is to carry out the function, and it is of no significance whatever whether the end result aimed at is riding discus-throwing piano-playing singing or what will you. The fewer muscles brought into play apart from the absolutely necessary ones for the performance of any movement of any kind the less will be the exertion required, the less exhaustion will result and the more accomplished will be the performance.

To return to the artist whether singer or player nothing affects an audience more surely than strain. The corporative larynx of an unfortunate audience suffering the ululations of a throaty tenor will instinctively contract in sympathy—though that is perhaps the last word to express their feelings. But when an accomplished performer is at work the result is a pleasurable feeling of relaxation. This psycho-physical re action is quite definite and can easily be registered. I have experimented on my naive and simple serving personnel by registering their breathing on a kymographion when listening to the laboured performance of an inferior violinist and when listening to the performance of a violinist of world reputation. The breathing is tense and erratic when listening to the bungler and relaxed and regular when listening to the artist. This is an experiment which could be used as an objective criterion of any artistic performance, and I am convinced that it would justify

itself brilliantly whenever the highly trained artist faced the under trained incompetent. For my own part, I never felt more relaxed and peaceful than when listening to Caruso. To achieve the desired effect, therefore, teachers of singing and trainers of singers should aim at excluding all inhibiting innervations, at developing the protagonist at the expense of the antagonist, and thereby securing that equilibrium between these two opposing forces which spells the accomplished performance.

The successive co-ordination of muscular movement is the second task on which training should concentrate if it is to be effective. The fact that teachers of singing make little if any difference between their methods of teaching men and women is in itself suspicious. The two sexes have two quite distinct ways of breathing. With women the part played by the thorax is the dominant feature of breathing, rather than that of the diaphragm; with men it is more the diaphragm, and therefore more stomachic breathing. Another thing which must appear strange in the usual methods of teaching is the tendency to treat all races and nationalities as though they were one. There is the Vienna school, the French school, the Italian school, and so on, but the methods of any of these schools are applied without distinction to pupils of whatever nationality. Nationals of one kind are recognizable as foreigners when they speak the idiom of another nationality because their own constitutional make-up has had a great deal to do with the moulding of their own language and prevents their speaking the other perfectly. A foreigner only very rarely succeeds in learning a language other than his own and speaking it without recognizable accent. For this reason it is quite impossible to use any particular method of teaching singing indiscriminately for all nationalities. A man talks according to the way his jib is cut—and that is the way he sings, too.

These are lesser differences, determined by environment, but nevertheless they all help to influence the final result, and attention to them can make just that difference between the good and the better in functional performance. The mouth, the great variety of skull formations with the resonant auxiliary cavities, the tongue, the muscles—they all play their rôle in the

final moulding of the voice which issues from them. The actual vocal chords are probably the least important factors. Of course, a violin cannot be played without its strings, but every expert knows how unimportant they are in the production of tone compared with the sound box of the violin, the fingers of the artist and the stroke of his bow

D Andrade, one of the finest baritones it has ever been my good fortune to hear had a larynx which was badly twisted to one side and his vocal chords were chronically thickened with catarrhal slime. I always treated him with the greatest care, for fear that this chronic catarrh might cause his glorious voice to deteriorate in tone, but it didn t seem to. Richard Tauber on the other hand, has no unusual features about his larynx, and there is hardly any difference to be noted between his and that of any perfectly normal healthy man. However Tauber has a palate and a tongue which react instantaneously to the finest fibrillary impulses. I have never seen anything more impressive of its kind. Nature has given this marvellous singer everything necessary for the highest performance.

In conclusion, let it not be thought that in my criticism of teaching methods I dispute the necessity of training even the most striking natural gifts. Far from it, but it certainly is a question of how But if that how is successfully dealt with, then teaching and training can develop even lesser-gifted singers to give a quite respectable performance. Even diamonds must be cut and polished.

CHAPTER XIII

THE VYALZEVA

RUSSIA WAS STILL Czarist Russia when I was called to Petersburg to the bedside of the Vyalzeva. Her name was a household word in Russia, more even perhaps as a living symbol of the mysterious vitality of her own people than as a singer When I first saw her her own vitality was fast approaching its end She was in the last stages of pernicious anæmia

At the height of her powers the Vyalzeva was the uncrowned Czarina of her country an ash blond beauty of irresistible charm

and attraction. Unfortunately I saw her only when she was very ill, but even then her large blue eyes were astonishingly beautiful. Her features were finely chiselled, her cheekbones high and Slavonic, her nose pure Greek, and when she smiled wanly in welcome I could see that her teeth were magnificent.

I had just finished and published my studies on radio-active elements, and in particular Thorium X, and their effect on the blood-forming organs, when I was called to Vyalzeva. It was January—not a time to choose to go to Russia—and I travelled with the North Express to Petersburg. It was seven o'clock in the morning when the train drew in, and it was pitch dark. I was met with a troika and driven out to where the singer had her house. Arriving I was led down a long corridor and into a very large room lit by one oil lamp. A man who had been waiting for me rose from an oriental divan. He was a Russian officer of enormous stature with a completely bald head which glowed in the soft light. His stern face and black moustache gave him the appearance of a Tartar. He was the friend and lover of Vyalzeva, and he took me to her bedside at once.

One glance was enough. The end was very near. However she was quite conscious and able to talk. Suffering ennobles the features of some women, and so it was with the Vyalzeva. Her expression was almost transcendental in its calm beauty. I was reminded of the sinking sun on a quiet summer's evening. The beauty of my patient, my own youthful impressionability, the strange quality of the atmosphere and the subdued lighting all combined to impress the scene on my mind indelibly and I stood there as a young and not very experienced doctor overawed by the atmosphere and faced with a hopeless case and fully conscious of my own inability to help. I did my best to give them both courage. The Vyalzeva smiled; she did not need it.

The next day the death agony began. I said what it was desirable to say in such circumstances. I told the Colonel that she was dying and that nothing could be done to save her and that in the circumstances it would be more humane to let nature take its course and not to attempt to prolong a hopeless struggle. But he would have none of it, and demanded categorically that I should do my utmost to maintain her life to the very last possible minute. Nothing remained for me but to

perform this really inhuman task so I promised to do what I could He was overcome with emotion knelt beside the bed and took her hand pressing it to his lips. He remained in that position for twelve hours until the soul had left her body

At that time Petersburg had the biggest and finest chemists in the world It was a four-storeyed house and packed with everything the science of medicine required including both medicine and apparatus I prescribed everything that could possibly be of assistance and servants ran backwards and forwards with bottles and packages. Oxygen apparatus was a rare thing in those days but one was secured and brought into use I fought that day as I have rarely had to fight. As soon as one medicine failed to produce a response from the sinking organism, stronger methods had to be tried Everything possible was done and everything depended on the two finger tips that controlled the failing pulse Death was delayed for twelve hours, and at the end of that time I broke down myself and wept, the relaxation of tension was so violent. That has happened to me only on one other occasion in my life when I had to bring a paralytic from the country into an asylum and the only way to keep him calm was to sing the habanera from "Carmen" It caused me to hate a beautiful opera I had previously loved

During the death struggle the news had spread in Petersburg and soon we were flooded with visitors delegates from the innumerable charitable organizations with which the dying woman had been connected, officers of the garrison and people of all social classes filed through the sick room and the holy candles flickered as the door was opened and closed The mother knelt before an ikon at a little altar in the room and prayed uninterruptedly All the ceremonies of the Orthodox Church for the dying were performed before this house altar Many visitors brought holy articles, relics, ikons and so on from which they hoped miracles. The Guards officers brought ikons framed in gold and set with precious stones These various items were shoved one after the other under the pillows of the sick woman, and I had all I could do to prevent her from being disturbed and to remove the things tactfully at first opportunity

The funeral procession was one of the most magnificent ever

held in Czarist Russia, a country of imposing funerals. Two regiments of cavalry had to be called out to keep the crowds in order in addition to great numbers of police. The Court and the officers corps were strongly represented though unofficially because the relation of the Czarist Colonel with the beloved singer had been without benefit of clergy The mourning was so widespread and so obviously sincere that the dead woman s popularity must have been enormous. I did not know a great deal about her beyond the fact that she was a great Russian singer It appeared that she had been a servant girl in a Russian high school for girls One day a well-known Russian lawyer was visiting his daughter at the school and whilst waiting in the reception room he heard the girl Vyalzeva singing as she went about her work. He was so struck with her voice that he made arrangements for her to leave her place and be trained as a singer When her training was complete she had ambitions to be an opera singer and thanks to his influential connections he succeeded in securing the rôle of Carmen for her at the Petersburg Opera House

The performance was a fiasco The lawyer stuck to his guns, however and Vyalzeva had not lost confidence in herself. However as it was impossible to secure another public engagement, it was arranged that she should sing at a charity concert. The audiences at charity concerts are patient and long suffering and no doubt it was in this Christian mood that they sat back and prepared to let the Vyalzeva, or plain Vyalzeva as she was then, perform. Fortunately Vyalzeva was a woman of high intelligence she had abandoned her operatic pretensions and she contented herself with the rendering of Russian gypsy songs The audience was galvanized by her performance and her song "Gayda Troika became famous at once and swept over the whole country She went from success to success, and before long she was famous. Millions heard her and millions wanted to hear her again and again. She was fêted and worshipped and the effect she produced on audiences was something like ecstacy The great love of the Russians for female beauty and for their own folk songs combined to carry the Vyalzeva to triumph after triumph, until she was beyond all dispute the first singer in the land

The human voice is an erotic instrument. In the world of nature sound song is a sexual call. The male nightingale pours his heart out in coloratura warbling only until he has attracted and captured his mate and after that his song is silenced. He does not sing for the sheer love of producing beautiful sounds, and as soon as his sexual requirements are satisfied he stops. In this case it was the female of the species that sang and that for pure love of her art, but nevertheless the effect was erotic. With the Vyalzeva the effect was not intentional. With some singers it certainly is, and with many the deep source of their song is their own sexuality. There need be nothing surprising or repugnant about this fact. The human voice and human sexuality are essentially paired. With the approach of puberty the voice changes. With the operative removal of the testicles the voice changes again. Can the close connection between the human voice and sexuality be doubted? A beautiful voice can work like an aphrodisiacum—for those to whom it appeals. The tenors and once again that is beyond dispute achieve their greatest effect on the opposite sex. In men they often produce feelings of hostility another interesting phenomenon. In my experience I have hardly met a coloratura singer who was not strongly sexed to an obvious degree. Only as long as the artist himself remains sexually vital does his voice remain at its peak. With the decline of the sexual secretions the voice loses its brilliance of quality. Another undeniable fact for practical psychologists is that, on the other hand sexual desire can be strengthened by singing.

I am quite sure that the unexampled triumphs of the Vyalzeva were due largely to the sexual appeal of her voice. Unfortunately I have heard her sing only via the gramophone, but, even so, enough has been captured to confirm me in my judgment. The voice was one of slight nasality with velvet-like modulations of tone of an altogether enchanting quality. And what must the living voice emanating from the beautiful woman have been like in its effect if so much can still be perceptible after it has been artificially preserved—or "canned", as Einstein would say? The memory of her triumphs is the only indication we still have. Small wonder that the entrance prices to hear Vyalzeva were unprecedented. When she died she

left thirty million roubles, at a time when the rouble was still a rouble and not one poor unit in an astronomical calculation. And although no spendthrift, she lived a luxurious life and gave away large sums to charities whole orphanages relied on her support for their existence. When she travelled it was always in her own special train. A rich grain merchant of Odessa is said to have made her out a cheque for three million roubles for an encore of his favourite song And on another occasion a would-be listener was heard explaining at the box-office after having been told the fabulous entry prices that he only wanted to hear her sing—nothing else

During the Russo-Japanese War she turned her private train into a hospital train and went to the front as a nurse It was here that she met the man she fell in love with and who remained her lover to the last the huge colonel who knelt at her side for the last twelve hours of her life—and made her death more difficult by his love.

My whole experience in Petersburg was almost *more* artistic than medical. Not merely because my patient had been a great artist, but because all the extraordinary circumstances of the experience were deeply artistic the environment, the deep mourning, the strangeness of a totally new and different civilization. It was difficult for me to believe that my own sensations were real Russian reality seemed more like an artistic creation, like a dramatic film with a star When later on I first saw the Stanislavsky theatre, this eastern dream world was brought back to my mind There the reality had seemed like art here the art seemed to have become reality

CHAPTER XIV

ORLIK SLEVOGT LIEBERMANN AND KOKOSCHKA

UNFORTUNATELY I HAVE had little opportunity of getting to know any of the great French impressionists, but I was certainly in close touch with their German colleagues, and intimately acquainted with the leading German impressionists Max

Liebermann Max Slevogt Emil Orlik and Oskar Kokoschka. I possess valuable original pictures and drawings of all four of them, given to me as a mark of friendship.

A lesser-known member of our circle was Josef Gruenberg to whom I have already referred in these pages. Graphic art was his hobby and he devoted the greater number of his leisure hours to it. He was an artist of great technical capacity with a wide knowledge of the graphic arts and their technique. He was Russian by birth and he sympathized with the revolutionary regime For this he was known amongst his friends by the nickname of Bolshie" He had a collection of examples of the graphic art, which whilst being neither particularly extensive nor particularly valuable as market values went at the time, was of the highest technical interest perhaps even unique, from the experimental point of view in that it contained not only examples of the art, but also of technical reproduction and it was this angle which claimed his chief attention

As everyone interested in the subject knows the more reproductions which are made from the same plate the less satisfactory each successive reproduction becomes owing to the damage done to the plate in the process of printing After a couple of dozen prints have been pulled the plate is practically worthless. The great variations in the prices of early and later reproductions of one and the same Rembrandt print, for example, are an illustration of this regrettable fact. The damage done to the plate is sad enough even in the hands of a pious expert with a feeling for the work of art he is reproducing, but when an irresponsible bungler gets on the job it is heart rending The application of the ink alone requires care, and then comes the necessarily powerful pressure of the roller which gradually blunts the fine ridges raised by the burin or whatever tool has been used.

Bolshie s idea was to construct a press which would not only spare the plate the great wear and tear of the current methods of reproduction but which would produce better results at the start and go on doing so He worked with industry enthusiasm and knowledge on this idea, and the result was his patent 'Hydropress' I don t want to go into the technical details, but the main idea was that the plate and paper were placed between

two rubber surfaces and exposed to a uniform pressure of up to 500 atmospheres. In addition, the roller principle was abandoned and the pressure was uniform, being exerted vertically through plate and paper over the whole surface. In consequence of this method far less damage—infinitesimal damage, in fact—was done to the ridges on the plate, with the result that there was practically no difference between the first pull and the thousandth each detail was as clear and the whole as bright as the first.

There was another great advantage in this method the uniform pressure made it possible to use all sorts of other materials for etchings apart from copper steel and wood. Glass, clay photographic plates, etc. could be used with much better effect than formerly This is a most important point for the future of the art of etching because each material holds its own special inspiration for the artist. Leonardo da Vinci was not far wrong when he declared that every surface already contained the picture to be produced on it.

A whole series of experiments were made in long and fruitful evenings. Slevogt, Orlik and Pankok worked on various materials etchings were made on glass with fluorine acid, and on porcelain with diamonds They were cut into wood and stippled on steel The result was printed in every possible colour on every possible material paper leather silk, linen, etc. The story of these experiments together with innumerable illustrations were ready for print, and the book was to be published by the Bruno Cassirer Verlag but unfortunately the Thousand Years Reich dawned and upset the plans, as it upset so many other valuable things. However all the material is in my hands, and one day it will be published.

Emil Orlik was born in Prague, but he lived most of his life in Berlin. Czechoslovakia has every right to be proud of him, and he spoke German with a pronounced Czech accent all his life. Many fine examples of his work are now carefully cherished in the leading print collections of Europe and America. He was at his most brilliant perhaps in rapidly drawn sketches, and the best were published in two volumes entitled "95 Heads" His work did much to popularize the graphic art in Germany but it did not satisfy him completely and, in fact, his favourite

medium was painting He was a master of all techniques, and he worked brilliantly in gouache, aquarell and oils tried his hand at frescoes, and did copper and steel engravings for the Mint, and woodcuts in the Japanese style He went to Japan, and he was one of the first to recognize the artistic value of Japanese woodcuts. He was an artist of manifold interests and an ability in all of them which amounted to virtuosity though truth to tell he never reached really classical heights.

Max Slevogt, on the other hand, stood supreme amongst German graphic artists, and in my opinion, and in the opinion of many critics better able to judge than I am, he was one of the leading graphic artists of our day As far as I know there is still not a single example of his work, either his engraving or his painting in any of the official English collections. That is a regrettable omission. Slevogt was a robust, thick-set son of the County Palatine, with a heavy mane of hair and a square beard. He always made me think of a tame lion A powerful and muscular man to look at him you would have thought his line of country was weight lifting and nothing in his appearance suggested the delicate and airy quality of his art with its fairy-like figures. Formally he was the descendant of Tintoretto and Delacroix. His colouring was reminiscent of the Italian, whilst his joyful representation of nature derived from the Frenchman. English artists and collectors know his name at least, but the time will come when they and collectors in other countries will snap up examples of his work as they were snapped up in Germany He had a romantic fantasy and its technical expression caused him no difficulties. He gave the idea form and filled it with force and inspiration and everything that he created lived. Both the ideas and the actions of productive men, and this is particularly true of the creative artist, have a lasting moral and spiritual effect on the rest of mankind only when they come from a pure heart. Griesinger one of the greatest brain anatomists of all times, declared Great ideas come from the heart' and thus expresses what I mean and gives us the key to Slevogt s success. What he thought, and what he drew and painted, his fantasy disciplined by his art and his art enriched by his fantasy all came from his absolute innocence of heart. Slevogt was truly one of the pure in spirit. He never had

arrière pensées he never had "designs" He was not suspicious or mistrustful, and if he was ever hurt, it was because he had been compelled to observe that someone else, whether artist or not, was not so forthright as himself That he even noticed such a thing was unusual, for his attitude to men and things was child-like in its simplicity Conventional values were nothing to him he didn t even see them. The thing that mattered for him—the only thing he saw—was the lasting historic or artistic value of a thing

Details were unimportant for him. Complex thinking and action came to him naturally and that, it seems to me is the essence of artistic intuition. He had little understanding for minor everyday matters, but his judgment in important things was extraordinarily sound. I have said that details were unimportant for him, but I should have said unimportant details A detail that affected the whole could take on great importance even when it might seem to other people to be trivial. For instance, he once wrote an urgent letter to me from Ludwigshafen, where he was engaged on his last great work. He wanted to know from me, as an expert in anatomical matters where the spear thrust of Longinus must have pierced Christ on the cross. Early pictures of the crucifixion show no such wound, and in later pictures the mark of the spear is shown in various places. Slevogt had begun to suspect that the legend of Longinus, whose spear is said to have given Christ the *coup de grâce* was of later origin. Obviously if the resurrection was to be acceptable as a historic fact then there must be no doubt whatever of the death of the crucified one in the first place. The Church urgently needed this absolute certainty Hence the apocryphal spear wound of Longinus. In this connection it is interesting to note that neither the Gospel of Matthew nor Mark make any reference to this spear thrust, whilst John written over a century later introduces it. In view of the lack of any contemporary confirmation and of the lack of any such wound in the earliest representations, Slevogt's doubt seemed well founded. In any case, I was able to tell him definitely that the mark of the wound could certainly not be where most artists had put it. Unless Longinus pierced the heart simply from the left, he would have had to drive the thrust from the right to

deep below the ribs in order to reach the heart that the skin entrance could not have been identical in position with the inner channel of the wound, and in addition with the sinking of the dead body depending from the cross the stab mark must necessarily have been lost to view in the skin wrinkles inevitably produced by the slumping of the body Such a wound from the front could therefore be no more than a mere indication. Incidentally my view in this matter was shared by Giovanni di Pisa, both father and son as can be seen in their two wood carvings of the Saviour hanging on the cross the one in Pisa, the other in Pistoia, both dating from the twelfth century In the end Slevogt decided not to paint the alleged *coup de grâce* wound at all That is an indication of what I mean by an important detail for Slevogt.

In ordinary matters Slevogt was good natured and very easy to influence but where his art was concerned he could be as immovable as a rock almost obstinate, and unwilling to make even the least concession But this must not be taken to mean that he was averse to criticism or that he refused to listen to it. On the contrary far from being annoyed when a mistake was pointed out, he was very grateful for the opportunity of correcting it. But when criticism attacked what he considered to be things of fundamental importance, things on which his mind was already made up, then was the time his obstinacy or apparent obstinacy made itself felt. Or perhaps the only answer he would make would be a pitying smile for the lack of understanding of the unfortunate critic

He was completely independent in his art, almost unconsciously so the idea of being anything else would never have occurred to him. Any sort of flunkeyism to the powers, whoever they might be, was utterly foreign to him. I remember on one occasion in Berlin when a number of artists, scientists and other personalities were invited to meet the Soviet Commissar of Education Lunatcharsky We were engaged in a lively and interesting discussion of Russian conditions, and Lunatcharsky was being bombarded with questions concerning the many points of difference that arose. Someone asked what he considered to be the main theme of modern Russian art, and without hesitation he replied, 'Naturally the glorification of the

Soviet regime This very frank answer caused a pause for digestion, which was broken equally frankly by Slevogt, who up to then had taken no part in the discussion "Well, you seem to have got just about as far as we were under Wilhelm II

Like all of us who have from time to time to do work which consists of a number of separate tasks, Slevogt would experience an inhibition in starting this or that particular task—a sort of anxiety For instance his illustrations to books were very rarely if ever done in the order in which they finally appeared. Each one was done just when the fit took him When he was doing his series of illustrations for Faust it was a long time before he could bring himself to start on the title page illustration. Whilst he was engaged on this work his only son was stricken with appendicitis. I decided that an immediate operation was necessary if the boy's life was to be saved. I told Slevogt, and he agreed with an almost curt "Yes" I had his confidence, and he left everything to me with *carte blanche* to do whatever I felt necessary That was typical of Slevogt too He knew that everything possible would be done for the boy and he knew there was nothing he could do so as worried as he naturally was, he resigned himself to a completely passive rôle and left my job to me without the least interference

Before I went off with the boy to the sanatorium to perform the operation I begged Slevogt to get to work on the "Faust" title-page in the meantime, feeling that it would occupy his mind better than anything else. He agreed and when I came back after the operation had been successfully performed to tell him the good news—it was in the middle of the night—I found him hard at work at his drawing-board on which was the almost finished title-page we know to-day It was a warm summer's night, and the windows were wide open. There was a breeze, and it had blown various sheets of drawing paper on to the floor Amongst them was a half finished draft of the title page. I picked it up and asked Slevogt what was the matter with it. It seemed quite excellent to me, and in fact, it was. He told me that whilst he was working a gust of wind had blown it on to the floor and that rather than get up and bend down to retrieve it he had started a new one, the one he was now finishing. The trouble of getting up, bending down, picking up

deep below the ribs in order to reach the heart that the skin entrance could not have been identical in position with the inner channel of the wound, and in addition with the sinking of the dead body depending from the cross the stab mark must necessarily have been lost to view in the skin wrinkles inevitably produced by the slumping of the body. Such a wound from the front could therefore be no more than a mere indication. Incidentally my view in this matter was shared by Giovanni di Pisa, both father and son as can be seen in their two wood carvings of the Saviour hanging on the cross the one in Pisa, the other in Pistoia, both dating from the twelfth century. In the end Slevogt decided not to paint the alleged *coup de grâce* wound at all. That is an indication of what I mean by an important detail for Slevogt.

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For me as a scientist it was interesting to observe how this process of enormous concentration overlaid all normal unconscious bodily functions. Towards the end of a task he would be bathed in sweat. It would trickle off his forehead down over his face and into his shirt in rivulets. And then he would begin to discard one article of clothing after the other That was not Bohemianism. He was not a Bohemian in his manner of life at all. It was just an instinctive urge to get rid of everything which hindered him in the least degree. You could talk to him at such times and he didn t hear a word you said. You could give him something to eat and he would take it automatically but rarely would he eat it. Ten hours concentrated work at the easel would go by without a thought for tiredness or exhaustion, though normally it was not easy to persuade him to take even a five minutes walk. At work his physical body was the absolute slave of his mind and of the task on which it was engaged

Slevogt was extremely benevolent to the rising generation. There was none of that very common jealousy of the older man in him. He was never envious of the success of others. It never occurred to him that anyone else s success could in any way affect his own interests, and, of course, he was right. He would draw your attention delightedly to the success of some brother artist, even if he knew him only casually—provided that success was truly earned. If it were not, then there was no more stern critic than Slevogt, who had no time for dilettantism. He liked young people and he got on well with them, but he had no talent for teaching I m no good as a teacher he said to me once. "You can t teach anyone how to feel, and I don t know much about materials and all the rest of it. He was right. He never placed any very high demands on his own materials. Almost anything would do though his material and its particular qualities interested him deeply During the fruitful evenings of the little experimental community which became known as SPOG from the names of the artists who formed it, Slevogt, Pankok, Orlik and Gruenberg he created marvels on steel, copper porcelain leather silk, lacquer plaster gelatine, paper or parchment working with oil, tempera, ink, etc., using the brush, the burin the needle a feather And the work

done ranged from the deepest and most powerful impression to the lightest feather like touch.

In my experience artistic ability and perception in a great artist are not confined to the particular field of his work. He usually possesses a sound feeling and understanding for other branches of art and a capacity for sound criticism. This was certainly true of Slevogt and in particular with regard to music and architecture I once asked him to paint my garden pavilion He surveyed the irregular six-cornered little building with its bow like embrasure and at first he could make nothing of it He studied it from all angles and from all sides, and then the inspiration came. He would re form the room architecturally by painting two columns and giving it a different lay-out. Once he had got the solution the actual work proceeded with extraordinary rapidity He also did my entrance hall and staircase and the ceilings

There has been a deal of discussion as to whether the pillars which prevent a whole view of his great fresco in the Friedenskirche in Ludwigshafen were left standing in opposition to his desire. This is not so, and he told me that the architect had approached him with an offer to remove them but that he had decided that it would be better to leave them as they were. He declared that the presence of the pillars had the effect of dividing up the painting into three parts whereby a striking triptique effect was created with impressive contrasts. Another thing he liked was the way the window embrasures gave a sort of frame to his work. The only thing he criticized was the unfortunate tone of the walls, and the acid-drop" colour of the glass. Perhaps some day it will be possible to meet these very reasonable objections—if the bombs have left the church still standing and his work undamaged.

Slevogt s nature was vital and he took great pleasure in the sight of vigorous movement On one occasion a film about Africa was shown in Berlin and he went to see it half-a-dozen times merely to enjoy one shot in it which lasted only a second or two—the tremendous leap of a full-grown lion. He was a romantic and a fabulist by nature, and he found his perfect complement in the Russian collector and experimentor Gruenberg our friend "Bolshie who remained his close friend until Gruenberg s death.

He loved his home country the County Palatine, and his best landscape pictures were painted there. He was by preference an out-of-doors painter but the state of his health and his numerous portrait commissions often confined him to the atelier His series of desert pictures show an extraordinary treatment of the problem of light and shade in nature, which fascinated him. He had been to Egypt, and he always wanted to go again just for the sake of the extraordinary light and shade phenomena to be experienced there, where the desert shadows often appear lighter than objects not in the shade. Slevogt's eye was naturally keen for such matters, and Einstein supported his observation by declaring as a scientific fact that the shade takes its light from all quarters and can therefore be lighter than the darker rocks in the sun as is often the case in Egypt.

The most valuable of Slevogt's drawings are those which represent figures and happenings from the land of fantasy His last and perhaps his greatest work of illustration was his series of illustrations for the second part of "Faust They are the graphic commentary of a genius on the work of a genius. He was less attracted by the first part of "Faust" though I have about fifty illustrations in my possession which were done for the first half and never published. When the great storm which has been shaking the civilized world to its foundation is finally over and real peace is with us again, perhaps they can be published.

Curiously enough, Slevogt began his artistic career as a singer but although he was undoubtedly very musical, his capacity as a painter and graphic artist soon outweighed his musical ability However in one respect it has been of importance to him in his artistic career hardly anyone has worked so brilliantly as Slevogt to provide a worthy background for the operas of Wagner and Mozart, and his scenery for "Don Giovanni" and "The Magic Flute" and for the Wagner operas at Bayreuth will never be overlooked in any history of the genre. In his country house in Neucastell in the Palatinate he created a temple to the figures of Wagner's operas. Very few people have been privileged to see the remarkable frescoes which decorate his rooms there, of figures and scenes from Wagner's works. The house is situated in a lonely part, surrounded by

great reputation was made belatedly in Germany—after he had already won recognition in France He remained without any official acknowledgement of his genius until the era of the Republic, but the old orthodox conservative methods at last gave way and impressionism (and following on its heels neo-impressionism) came to the fore and with it Liebermann, who, with Slevogt, was its leading representative

Liebermann was a highly educated man and a fascinating talker He was a keen critic not only in matters of art but in many affairs of public interest. He liked to talk, and he did it extraordinarily well with a great flair for epigrammatic wit. He was an amused cynic, and his humour was well-savoured. He was proud of his own great ability proud but not offensively arrogant Once in the atelier of a colleague Count Klackreuth, he exclaimed in astonishment, Good Lord have you got a rubber! And on another occasion he declared "Drawing is the art of omission" He was President of the Academy and eighty four years of age when he lost his Fatherland and his Fatherland lost him. Asked after his health in those early days of Hitler s triumph, he declared frankly Unfortunately these days I can t eat as much as I d like to vomit

When I first made his acquaintance he was getting on for sixty His figure was slim and elegant, but already a little stooped He had a long bald head and a glance of Frederician keenness, as though he were summing up his *vis-à-vis* for a portrait sketch. He was a European, but not an internationalist —in fact there was more than a dose of Prussian patriotism, and even local particularism in his make up I should place him with Monet and Pissaro Israels and Leibl With Menzel he was a Prussian high light, and with Leibl a German high light.

No one has yet—despite many efforts—succeeded in satisfactorily defining once and for all the graphic art of painting There are aphorisms from both great and small on the subject. The last word in wisdom seems to me to be that it does not matter in the least what a man paints provided he paints it well. Some will paint in full detail and in perspective. Others will leave it to the imagination of the beholder to provide what they omit. But three harmonies must be respected (*a*) the harmony of depth (*b*) the harmony of light and shade and (*c*) the



A SLEVOGT MENU CARD FOR A DINNER-PARTY GIVEN BY THE AUTHOR



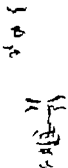



FRITZ KREISLER











METAMORPHOSIS DURING A CONCERT

Impressions by Orlik



LUNATCHARSKY
Sketch by Orlik.



ALFRED KERR AT A REHEARSAL IN THE DEUTSCHES THEATER
Sketch by Orlik



REHEARSAL AT THE DEUTSCHES THEATER. REINHARDT HAUPTMANN RILKE AND FRAU HAUPTMANN

Sketch by Orlik.



MAX REINHARDT
Sketch by Orlik.









OSKAR KOKOSCHKA PRODUCING HIS OWN PLAY 1919

Sketch by Orlik at a rehearsal.



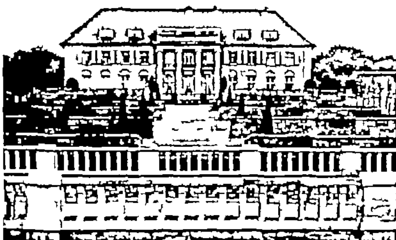
PORTRAIT BY REMBRANDT OF HIS SO-CALLED "SISTER" PAINTED IN 1632 IN THE POSSESSION OF THE AUTHOR

The authenticity of the picture has been vouched for by Wilhelm Bode and Max Friedlaender



COUPEUSE D'ONGLE BY REMBRANDT

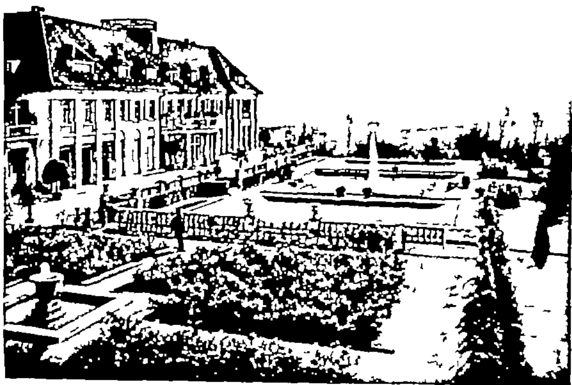
The author maintains that the picture of this name at present in the Rennes Gallery is a copy of this one, which he "picked up" for nothing When he got it, it was badly spoiled by overpainting and it was only after cleaning it that he made his discovery It is a portrait of Saskia.



SOUTH FRONT OF HAUS HAINERBERG, THE FAMILY'S COUNTRY HOUSE IN KONIGSTEIN IM TAUNUS, NEAR FRANKFURT



THE SAME, USED BY THE NAZIS AS A POSTAGE STAMP FOR PROPAGANDA AFTER THEY HAD CONFISCATED THE HOUSE



HAUS HADERSBERG NORTHWEST TERRACE

HAUS HAINERBERG LOUNGE AND DINING-ROOM



THE FAMILY PORTRAIT BY SLEVOGT



EINSTEIN WITH HONORIA MAROOT, ODILO ANDREW AND PETER HARIOLF ON THE AUTHOR'S ESTATE AT GATOW, NEAR BERLIN



THE AUTHOR IN HIS HOME NEAR AYLESBURY BUCKINGHAMSHIRE

harmony of colour The subject-matter has perhaps the least influence on art the kitchen chair when painted by van Gogh is as significant as the dead matador of Manet, and Leonardo's Gioconda is comparable with the self-portrait of the ageing Rembrandt.

Both my friends Slevogt and Orlik had poor eyesight. Slevogt could not see any details at all It was as though nature had deliberately affected the instrument of art in order that the fantasy and the imagination should be freer in expression. In art the quality of the product need not deteriorate with the deterioration of the "instrument" if we may so regard the eye. To take an example from another sphere of art, Beethoven's music did not deteriorate as his hearing got worse and he finally became deaf And to return to painting, Rembrandt's pictures seemed to rise into the transcendental as his eyesight failed.

Oscar Kokoschka is also hampered—in the ordinary sense—both in sight and colour sight. His wonderful harmonies are found in his imagination. I once asked him how he painted his portraits. "I imagine that my subject's head is in a frame which is just the size I intend to paint the picture" he replied. "Then I paint the parts which stand out most, and then I work my way back gradually dealing with each level as it comes, and in this way I obtain plasticity and vitality in a portrait.

Only the deliberate and conscious part of art can be learnt. In painting as in all other arts there are certain handicraft maxims which can be assimilated, but real art begins where all systems come to an end, where inspiration and feeling make up for the lack of technical aids. Liebermann once declared, "Art comes from ability and if you're able to do a thing there's nothing in it" A rather despairing and resigned *aperçu* of a great artist. Of course, an artist meets with problems. I have often discussed such problems with them, but they have all insisted that there is no generally applicable solution All in all, rules in art seem to have fulfilled their purpose when the artist had got to the point where he can safely ignore them. To respect them to the letter is the part of the dilettante.

However this nihilism must not lead to the conclusion—a very false one—that art schools are of no use whatever But if

an art school is to be helpful it must know its limits. Too much must not be expected from artistic training Above all, the schools must teach their pupils the handicraft side of the business to spare the novice all the avoidable mistakes and to give him technical dexterity But the most important task of any art school is to create an atmosphere in which ideas and taste can develop

Orlik was an enthusiastic teacher Slevogt never had, I believe I am right in saying more than four pupils, and they were all exceptional. Liebermann never taught at all, probably because he had no faith in the results. The sum total result of art-school teaching is very small There are a very great number of children who show quite a degree of talent early on. Such talent may sometimes continue to develop in later life, but only rarely does it reach any real artistic maturity Usually the end of the puberty stage sees the end of the talent, or at least the end of its development. On the other hand, artistic talent which begins to develop after the eighteenth year is really promising

Shortly before Hitler came—at least they were spared that deplorable *dénouement*—I lost all three of my friends Gruenberg Orlik and Slevogt within a few weeks of each other It was a heavy blow for me.

CHAPTER XV

DIEFFENBACH AND GAUL

One morning on Capri I was wandering alone through the countryside to get rid of a Katzenjammer from which I was very deservedly suffering owing to having spent the previous evening with "the last of the Bohemians" Otto Erich Hartleben, in his favourite local the Kater Hidigeigei' I had not been that way before, and suddenly I came across a lonely white-washed little house with a marvellous frieze around it at first floor level It represented a line of exultant youths happily mixed up with all sorts of animals dancing off as though to a heavenly fête It was an astonishing piece of work, exultant in its sense of care-free happiness. I was deeply interested in the mystery and I went up to the house, where I was met by a very

old woman who wanted to know my business. I asked her where I was and whose house this was, and she answered that it was the house and studio of Meister Dieffenbach, and the next moment I stood before the master of the house himself, a biblical figure with long grey hair and beard, garbed in a grey smock and sandals. He received me with simple courtesy heard me express my interest, and then ushered me into a large studio with an upper light in which half a-dozen lads were gathered, all dressed in the Greek chiton, and each with a broad band of coloured ribbon round his head. They all looked like replicas of Orestes, and they were engaged in painting The walls were covered with pictures, all painted with the same peculiar technique and each invested with the same notable plasticity The subjects were mostly animal ones, but a recurrent motive was the so-called Faraghoni, the twin jutting rocks of Capri. A particularly striking painting was of a roebuck with an aureole formed by the rays of the setting sun and round the head was painted the words "Thou shalt not kill!"

No one disturbed me, and I looked at the pictures at my leisure, and was consumed with astonishment. And then I realized that I was in the atelier of the painter of the wonderful 'Praying Boy', the painting I had greatly admired in the Castle of *Kaiserin Elizabeth in Miramare near Trieste.* I remembered being fascinated by the picture. The classic figure of the boy with eyes and arms raised to heaven was contrasted with waves and palms thrashed by a tremendous storm and seeming to leap out of the picture. It was an extraordinary work, and it and the name of its painter had remained in my memory This was the persecuted Dieffenbach to whom we medical men really owed the first move towards the scientific study of metabolism

Dieffenbach was a passionate lover of animals and a convinced vegetarian He was opposed to the killing of animals either for man's pleasure or for his food For humanitarian reasons he refused to eat meat, and he brought up his whole family as strict vegetarians. He was at one time the Court Painter of King Ludwig of Bavaria, but when the authorities made him difficulties despite his privileged position he abandoned the Court and went to live with his sister in-law and his

children in what was known as the "Felsenkluft" near Munich. But the authorities continued to pursue and persecute him, and a process was begun to deprive him of the charge of his children on the ground that his mode of life and his principles of nutrition were opposed to the well being of humanity and likely to cause suffering to his children

The case came up for trial, and the court called for an expert report as to whether it was possible to keep growing children in health and strength on a vegetarian diet The report was drawn up by the famous physiologist Voigt and the hygienic expert Professor Pettenkofer both of Munich University and it pronounced against Dieffenbach and his vegetarian upbringing for children. Both experts admitted that it might be possible for adults to maintain their health and strength on a vegetarian diet provided they lived a sedentary life and did not engage in any vigorous physical activity but they were both in agreement that such a diet was inadequate for the growing organism of a child The court therefore placed Dieffenbach's children under normal care.

Now although those two experts came to a wrong conclusion, their report became the basis for our modern knowledge of the physiology of nutrition. Their work led to the establishment of what are still to-day regarded as the minimum requirements of the human body with regard to albumen fats and carbohydrates. Their investigations have often been corrected, revised and disputed but they retain the credit of having started us off on the path which led to the modern science of human metabolism. Their figures were over schematized, and neither of them bothered about water or salt content—not to mention vitamin content, about which nothing was known in those days And although they should have been aware of the inadequacy of their experimental results, they nevertheless jumped to conclusions of only very conditional validity

Dieffenbach was therefore not overfond of members of the medical profession In addition to this undoubted miscarriage of justice, he had suffered as a young man from typhus, and thanks, as he thought, to medical incompetence, it had left him with a thrombosis of the right arm. The result was the worst thing possible for a painter a muscular weakness which made

it impossible for him to use his brush properly However like so many other indomitable men before him he made a virtue of necessity using the palette knife to put on colour as though with a trowel. It is quite a well-known method of painting now but it was very unusual then, and together with his great artistic ability the method resulted in an exceptional degree of plasticity and vigour so that his pictures almost looked like bas-relief. The best of his work amongst the paintings I saw in his atelier were in my opinion those which had the Faraglioni as their subject. This striking natural feature of the landscape had obviously impressed him deeply and he had painted the double rock many times and from all angles as the God-created pillars of a Templum Humanitatis. He cherished a great plan of embodying these two natural pillars in a great House of Prayer to which the dwellers of the earth should go in pilgrimage to become nobler and more cultivated. Fate mercifully prevented his realizing this project, which could have been only a crying and rather ridiculous anachronism in our materialist days.

I had every reason to conceal the fact that I was a member of the despised medical profession and I felt justified in doing so, for I was not anxious to spoil my welcome from the beginning We became good friends, and I spent two weeks in what I found the very refreshing atmosphere of his household I ate at his table often, and I must say that each meal was an adventure. It certainly was for Dieffenbach, and he went out in search of the ingredients for each one. He was a convincing enough advertisement for his own mode of life Although already an old man, he had the strength and vigour of a young one, and he would spring from rock to rock like a mountain deer when his eagle eye spotted just the right sort of grass or herb he required for the meal He was more than a vegetarian more than just a non-meat-eater He was opposed to cooking as well He was, in short, a strict, unfired-food addict, the predecessor of Bircher Benner the unknown God Father of the temple Bircher Benner raised to the uncooked carrot. I went out herb-hunting with him and I shared his meals, but—to my shame I suppose—I never abandoned my succulent "Befsteka al ferri" in the "Kater Hidigeigei" and when I ate with Dieffen

bach I had either just had one or I went back to have one afterwards. However, I don't want to say with this that Dieffenbach's preparations of grass, herbs, etc., didn't taste good. They did, and I ate them with relish—if with *arrière pensées*

I do not condemn anyone who is so anxious to lengthen his life that he is prepared to abandon many or indeed all of the pleasures of life to that one end. Let him, I say—as long as he doesn't want me to do the same. A strict vegetarian regimen would be a dismal prospect for me: life would not be worth living, much less lengthening. I like eating tender juicy beefsteaks and I approve of all they symbolize. When I eat a good meal I eat a lot, and I always have done (I except the period already mentioned when professional exigencies brought me to the less pleasant carving up of dead human bodies and temporarily robbed me of my pleasure in good meat). Some of my friends are vegetarians: Bernard Shaw, for instance. But at his table I enjoyed the mutton chops Mrs. Shaw cooked specially for me—*chacun à son goût.*

One day whilst we were out on one of these grass-and-herb-hunting expeditions Dieffenbach mentioned how worried he was about his sister-in-law. That was the old lady I had seen at first. "She constantly runs a high temperature," he said anxiously, "loses weight steadily, suffers from night sweats." And so on. In short, he described to me a text-book case of chronic consumption. What was I to do? I dared not give him advice as a medical man and cause his old hatred of the medical profession to flare up again. And what would he say if he discovered I had been indulging in a harmless swindle in order to win his friendship? And then I remembered the sanatorium founded by Landouzy and Vieuxtemps in Tunis. Garlic was their specific. And being a herb, or a vegetable, my praise of it impressed my nihilistic friend. With discreet advice on my part it was arranged to start the old lady on a garlic cure. I remained in correspondence with Dieffenbach after I left right up to the outbreak of the first world war, and to my great pleasure I learned not only of his own continued physical well-being, but also of the remarkable improvement in the health of the old lady. *Vivat* garlic!

Sculpture is the simplest of all the arts because it has nature

as its immediate object—*tertium comparationis* It is also the most primitive of the arts, and it therefore developed to great heights very early on in the history of mankind. The early classic sculptures of all civilized peoples—the Egyptians, the Incas, the Chinese and the Greeks—can hardly be improved upon. In respect of sculpture classic antiquity is the unsurpassable model.

Naturally this does not mean that new great works of sculpture will not go on being produced for our pleasure and admiration until the end of time. But when we find new developments of style in present-day sculpture it is usually due to the introduction of new materials, and thereby the creation of new inspiration. It is very difficult, if not impossible, to do anything fundamentally new in sculpture owing to the simplicity of the workable material and the limitation of the means of expression The art of sculpture lies not so much in the representation of form as in the extent to which that form can be given vitality

However despite all I have said there was a sculptor in Berlin who succeeded in creating unusual work. His name was August Gaul, and he specialized in the modelling of animals, chiefly on a small scale. In his hands the simplest forms took on a beauty of line which stamped him as a master He was a specifically German artist, and as his genius was soon recognized, everything he did was bought up at once with the result that very few examples of his work went abroad to make him known in other countries.

Unfortunately he suffered from a chronic disease which hampered him for many years and finally caused his death. Towards the end of his life I spent many happy hours in his atelier where he went on producing fine work right up to the last. August Gaul was another striking example of how the human will can keep a falling body going until a task on which it has set itself has been completed His last work was the sculpting of an orang-outang in granite. It was sheer physical hard labour as hard as any Irish or Italian labourer ever did with pick and shovel. August Gaul did it in his declining years with a carcinoma spreading gradually to all his internal organs The day after the work was completed he died

My friendship with him and my constant visits to his atelier gave me an opportunity of doing a little modelling on my own and studying the development of masterpieces as they were gradually formed before my eyes. It was a very interesting and impressive experience. It was in this period that Gaul sculpted 'The Well of Good Fortune' which was commissioned by the Berlin Town Council to be erected in the centre of the Wittenbergplatz. It is (or was?) a delightful piece of imaginative art, with all the animals etc folk legend holds to symbolize good fortune arranged in fantastic groups such as herrings, carps ducks, piglets and so on.

Apart from being a great sculptor Gaul was a man of striking personality He was a real peasant a son of the land, in deep communion with nature and all natural things He had received little formal education, but he was a man of sound intelligence, with a highly developed critical faculty not only in artistic matters Above all, he was good natured and warm-hearted The sketches which he always made before beginning any work are remarkable for their simplicity and economy of line and their intensity of feeling They are reminiscent of Chinese and Japanese work at its best

August Gaul has been dead a long time now and our friendship lies far back, but to me it is still a living and highly valued memory In my collection I have a sketch by Orlik of August Gaul at work, and a drawing of his remarkable group, 'The Five Geese' which was a happy idea of my father-in-law's five daughters brilliantly executed by Gaul for their father Adolf Gans. Gans is, of course, the German word for goose.

Gaul hated any affectation or over refinement in art. Fundamentals, whether of idea, line or form, were everything to him He even disliked the artificial garden His own was a beautifully kept lawn—well no hardly a lawn let us say a stretch of carefully tended grass covered with literally the most extraordinary collection of field and meadow flowers, both native and exotic. It was his hobby When any of his friends went on a journey anywhere, to any country he would ask them to bring him back, or send him, just a handful of dust from the floor of some barn. In such handfuls of dust were, of course, the seeds of all the natural flora of that particular

countryside. The result was that in his garden there were the wild flowers of India, China, the Alps, the Pyrenees, Jamaica, Norway and so on. Almost throughout the year the stretch of grass was a mass of beautiful colour as the various flowers came into bloom. It struck me as a unique and lovely idea, an idea such as only a truly artistic nature could have conceived. When I think of August Gaul, I can always see that wonderful stretch of grass and flowers in riotous bloom.

CHAPTER XVI

I COME TO ENGLAND

BY 1930 THE crisis was already well under way in Germany and the country was living largely on the vast sums that streamed in from abroad. It was not easy to decide what to do with all this money and monumental edifices were erected sport arenas and *festspiel* halls built. Life became more and more luxurious and although warnings began to be heard, they were ignored Borrowing and extravagance are hard to abandon.

The world economic crisis brought the pseudo-prosperity of Germany's economic system to an abrupt end. On Friday May 13th, 1930 Schacht made a speech which had catastrophic consequences. That was the notorious Black Friday The stock exchange reacted violently and the whole edifice of confidence collapsed like a pack of cards. Schacht himself was a vain and weak character His ability has been enormously over rated He was certainly clever enough always to fall on his feet, but that was about all. From the National Bank he went to the Reich s Bank, praised and complimented on the way by Jakob Goldschmidt. He was always a man of facile convictions, and the one uppermost was the one which promised him most advantage at the time. In the end he became a Nazi His personal appearance was comic. He looked like an Aunt Sally at a fair his small head perched on top of a very high stiff collar as though it were there to be knocked off His scrubby little moustache and his gold pince-nez looked as though they had

been stuck on to show patrons which was the front. His speech against any further acceptance of indebtedness delivered on Black Friday was perhaps the most stupid and untimely in the financial history of Germany It caused catastrophe and tremendous confusion and it made the situation much worse than it need have been

Unemployment rapidly became a scourge and before long the figure stood at six millions. The dissatisfaction of the proletariat naturally increased dangerously The middle classes grew panicky and feared for the safety of what little they had been able to save after the war loan swindle and the inflation. The Nazis grew more and more insolent and arrogant, and the beautiful iridescent bubble blown by the banks burst with a loud plop. In this desperate situation Germany had an impotent government and a senile President. Various emergency decrees were issued to patch the holes in the threadbare garment of the Republic Capital sought salvation in flight. 'Society' danced and dined and was more riotous than ever before. The thoughtful withdrew in despair and waited in resignation for what might come. Existence in these circumstances became more and more intolerable. Everyone hated everyone else, and envied his neighbour The crisis, of course, affected people in different ways. There were still rich people with luxury cars, but in those uncertain days they were often bombarded with stones whilst the more humble Ford rattled past unmolested It was a risk to show oneself in some parts of the town well dressed

Before long rioting and street demonstrations became frequent occurrences and bloodshed began. The Communists enjoyed considerable support, but their party was weak and badly organized and they were unable to hold the Nazis in check, for the Nazis enjoyed the tacit protection of the Reichswehr and were subsidized to the tune of many millions by the leaders of Germany's heavy industries. On the other hand, the Communist movement was persecuted and oppressed primarily by the Socialist Ministers and hampered in its defensive measures against the attacks of the Nazis. Political disputation entered into social life, and lost nothing of its violence there. Any discussion of the situation almost invariably ended in open

hostility The best thing to do was to withdraw into the domestic circle.

Matters came to a head like an avalanche. The Nazi propaganda was clever They told everyone just what he wanted to hear The masses were promised greater welfare benefits, social improvements and anti-capitalist measures. The heavy industrialists, who put up the money for this propaganda, were promised a free hand and security of capital, and, of course, protection from Bolshevism. The nationalistic large-scale proprietors and industrialists were fools enough to be taken in by this, and so were masses of other people.

Karl Duisberg, the Chairman of the Board of Directors of the great German dye trust, I.G Farben, a vain man always anxious to push himself forward, got up a subscription amongst the industrialists to purchase an estate and present it to the Reich s President Hindenburg The fund was over-subscribed, and the estate was bought and presented—not to Reich s President Hindenburg, but to his son Herbert. This was obviously done in order to avoid the death duties which would be payable on the death, presumably not far off, of the old man Questions were asked in parliament as to the legality of this trick, and Secretary of State Zarden replying for the Government declared that they were not prepared to countenance the evasion

In addition to this unpleasant affair it had become public knowledge that the East Prussian Relief Fund amounting to 800 million marks, had been used not so much to assist depressed agriculture in Eastern Germany as to line the pockets of the Junkers. In short, Hindenburg and his family and their Junker friends were in an awkward spot. But the very man was available to get them out of it—von Papen, who dissolved parliament and made any responsible control or investigation impossible. However that could only be a temporary measure, and any responsible government which subsequently took office would be compelled to take up the question afresh. Obviously therefore no responsible government must be allowed to take office. Negotiations were opened up with Hitler and ended with his appointment as Reich s Chancellor of Germany Clearly the whole question of the Hindenburg family had been satisfactorily settled as part of the negotiations, for one of the

first actions of the new Government was to see to it that the Hindenburgs had no further trouble with the Fiscus. This piece of self-seeking infamy undermined what was left of public probity Any scoundrel could fish in the muddy waters the affair had churned up Germany's public life was rotten and things stank.

Even before they took office the Nazis maintained a wide spread and well-organized system of espionage, and when Hitler was finally in power they had an up-to-date card index of all the people who had exposed themselves in one way or the other by opposing them—perhaps only by word of mouth in private circles. The normal rights of the citizen were swept away and arbitrary brute violence ruled. Goering publicly declared that the simplest Brown Shirt had unlimited power over anyone not a member of the Nazi party In the brutish anarchy that followed life became intolerable for a civilized human being

It was enough for me. I am not a party politician, but I cannot breathe easily in an atmosphere of force and fraud in which no man can be sure of even the most fundamental rights of a civilized human being I decided to leave Germany together with my family Not unnaturally after half a lifetime spent in Germany it took me some weeks to put my affairs in order and during that time I was enabled to see the new regime at work. At first I wanted to leave the move until my children had at least concluded the current school year I knew that I was no unknown quantity for the Nazis. My libertarian views were well known for far from making any attempt to conceal them, I had always proclaimed them. That was quite sufficient to make me an object of hatred. However I was a man with powerful friends both inside and outside Germany and the Nazis knew it. I felt that this would serve to protect me for as long as I needed. However one day I was earnestly warned by the head gardener at my country house not to visit the place again without first having taken precautions for my personal safety because the local Nazis were known to be waiting for the chance to get me out there in the country away from the publicity of town life.

I don't think it was any lack of personal courage that made

me decide to leave the country without waiting for the end of the school year The whole thing sickened me, and I felt that the sooner I was out of it with my wife and children the better Very well, I left the country in which my wife's people had been settled since the fourteenth century, and to whose culture and well-being they had contributed not a little, the country in which I had spent thirty-five years of a fairly useful life. I too, had contributed something to its well being and civilization for one thing, I had done quite a deal to educate its growing generations. However it had now become a shame and a disgrace to the civilized world, and to leave it was the only thing to do, but it was a sad end to a life's work.

First of all I went to Switzerland, a country of ideal civic morality and there, in its clear mountain air I got rid of some of the prison atmosphere I had breathed in Nazi Germany and got over some of the disgust I felt. My feelings were compounded less of hatred and a desire for revenge than of deep contempt and an almost physical revulsion. I have always been a healthy man. 'Nerves' have meant nothing to me. And if I was ever tired, it was only a healthy tiredness after hard work. Exhaustion was something I had never known. It is easy to see, therefore, that I have no constitutional tendency to neurasthenia but in that first period I had an unconquerable urge to a neurasthenic reaction the desire to spit in disgust whenever I heard the name of Hitler

In Switzerland I had time to consider at leisure where I should finally settle and spend the rest of my life, for it was quite clear that what was happening in Germany was no passing phase, no temporary sickness soon to be followed by recovery It was a difficult problem for me. Normally such a decision is never required of the individual. The place where he will stay and spend his life is more or less settled for him by his parents, as it was for them by their parents, by the fact that he is born in a certain country and is its citizen, is brought up in its culture and develops strong ties to it. Generally speaking it is true of a man, just as it is of a plant, that he will do best where his roots have developed His native ground is a source of strength. The Antaeus legend is based on a very profound truth. This strong relation with one's homeland seldom if ever

dies completely And if one has to change one's environment, then new roots form in the new country but the rhythm of earlier life is retained wherever one is. I had already left my homeland once but Hungary was not far off, and from Berlin I could easily go home whenever I felt inclined. Now the situation was different. I had to go farther I was quite determined not to leave Europe But where was I to go?

I could not go back to a primitive country like Hungary and be happy In addition, Hungary was much too close to Germany I could never have settled down in the corrupt Balkans. I had loved Italy and admired its people, but I could not leave Germany to settle in another country ruled arbitrarily by another paranoic megalomaniac. And France for me has always been a country of confirmed Xenophobia, with no attractions as a permanent residence. Its proud motto "Liberty Equality and Fraternity" is compelling, but I knew very well that the reality behind it was very different. Despite a thin veneer of democracy and liberty the fundamental tendency of the French people is a stiff necked and obstinate conservatism. No, not France, therefore. And Spain too, was a dictatorship with a militarist Primo de Rivera, at its head. For all its apparent solidity Portugal was a volcano of underground revolutionary rumblings Holland, yes Holland was a freedom-loving country of upright citizens, a country of education, tradition and culture but unfortunately Holland was geographically too near the plague spot of Europe. The same was true of Denmark. I had no desire to live in the Scandinavian countries, and Russia was closed to me. And of Austria and Czechoslovakia they were already saying "The rats are boarding the sinking ship

This all sounds very much as though I chose England for want of anything better and under compulsion but that is not true. Quite apart from all other considerations, England would have been the country of my choice had I been perfectly free to choose, *as it was the country of my limited choice. From the* beginning I had decided, but it was incumbent on me to canvass all possibilities, for I was not only choosing for myself, but for my wife and above all, my children. England's reputation in Europe was high and my own opinion confirmed it. I felt

that the interests of my three children, who were at that time eight, thirteen and fourteen years old, would be best looked after in England. The only doubts I ever had concerned my own inadequate knowledge of the language, and the climate. On the other hand my children had enjoyed an English education from the beginning—at the hands of their Scotch governess. My mind was made up, therefore, and I travelled to London via Paris.

I arrived in the hot summer of 1933 London at the end of the season seemed dead. We went in the first place to Frinton, and then I succeeded in renting a beautiful old house in Thorpe le-Soken in Essex. Apart from my cars and a number of travelling trunks, we had rescued none of our possessions from the Nazis—oh yes, I had almost forgotten the very long Busch-Zeiss telescope which I had bought for my eldest boy Peter Harolf, who was interested in astronomy—I think I mentioned that his first lessons in that fascinating science were given to him by Einstein, so he had had a good start. I felt that it would be too heavy a blow for him to lose his beloved telescope, so the monstrous thing was carted along with us. My daughter Honoria and my younger son Andreas Odilo were still in the doll and toy stage, and their nursery possessions helped them over the transitional period *Theirs was still the limited horizon of* childhood, and their well-being was more easily secured. Happiness in childhood consists chiefly in the satisfaction of the accustomed little desires and habits, and parents must maintain their little world for them as long as possible.

My friend Kurt Hahn the founder of the famous Salem School at Bodensee recommended me to Winthrop G Young and it was from this new-found friend that I received all the advice about educational matters I required My eldest son was sent to Harrow and my daughter went to Hayes Court in Kent. I remember asking a little doubtfully at Harrow whether it would be possible for my boy to continue his study of astronomy On the Continent such a question would have been regarded as the folly of a weak-minded and doting father At Harrow my question was apparently regarded as normally intelligent, and before long a Society for the Study of Astronomy was formed with six members, my son s magnificent telescope, and a *tower* specially adapted for the purpose.

I left Peter to his own devices for the first time in his life, and not without a certain amount of misgiving on my part, though he didn't seem to mind. I had heard something—too much perhaps—of the self-discipline of the pupils amongst themselves and I was wondering how my boy with his continental upbringing would adapt himself to it. However I needn't have bothered and indeed I didn't unduly because I had great confidence in English schools and their methods of education and I felt that their system was based on reason good will and above all long experience. Continental education is based entirely on formal education and I felt that perhaps the sudden transition might come as a shock to a child experiencing English methods in strange surroundings and for the first time. In the upshot all three of my children not only acquired all the knowledge necessary for their education but they were also happy in the process. After a few weeks they forgot their former schooling and lived completely in the present. The primary reason for which I had come to England had been justified to the full and I felt it was no mean tribute to the English educational system.

Later experiences, of my younger son at Westminster School (and at the Grammar School in Aylesbury during the Blitz) and of the elder boy at Cambridge only strengthened my confidence and increased my enthusiasm for English educational methods. I think I am entitled to express a judgment because not only do I know the continental system very well but I saw to it that my information in this country was not one-sided. Let it not be thought that my enthusiasm is uncritical. Not at all, for I can see clearly enough where improvements would be helpful but in this case it is a question of making something which is already good still better, and it would be a great pity if such improvements as are desirable were brought about to the damage of a long and valuable tradition. Obligatory general schooling was introduced into this country comparatively late in the day and certain things were omitted which should be introduced now by intelligent reforms, for the number of illiterates is still relatively high for a cultured and civilised community.

However I regard with real misgiving the present tendency

to approach the German ideal in educational matters. Herbert Spencer's principle that it is more important for the country that its schools should develop character rather than educated mediocrities is one that I enthusiastically applaud. Physical training through games kills two birds with one stone. It has been said so often that it may sound trite to say it again, but it still remains true that games develop character sound judgment and healthy ambition whilst at the same time they discourage jealousy and envy They also make it possible for the less-talented pupil to have his share of success—by physical training Sport teaches poise and patience it develops self confidence, encourages comradeship and a community spirit. What point is there in sacrificing such advantages for the sake of forcing excessive education on untalented pupils? Particularly as it very often means stifling the joy of life and producing boredom, if not bitterness.

I hope that no one will accuse me of underestimating the desirability of mental training because of what I have said in favour of physical training as well No one upholds the training of the mind in things of the mind more than I do, but I certainly adopt the English viewpoint that it should not be one sided. I will even go so far as to admit that the average education of the average Englishman suffers by comparison with the Continent, but as one of the teachers here said to me frankly in answer to a question of mine, Intelligence is not everything" And most certainly it is not.

CHAPTER XVII

I GO BACK TO SCHOOL

HAVING SUCCESSFULLY solved the problem of my children's education, it became time to think of my own future and what I was to do in it. I was already in the middle fifties, but I felt far too vigorous to think of retiring And then it seemed to me a pity to waste what I had accumulated of knowledge and experience in my profession, when I could still be of use in the workaday world, when I could still help others and earn my

own living at the same time. It did not take me long to make up my mind to continue with my profession.

There are many and varied opinions concerning the propriety of a foreigner's coming to another country and earning money in it. I feel that to regard the whole problem merely from the point of view of the money that is earned, and completely to ignore what is given in return, is a narrow view. The moral and other value of a doctor's work in healing the sick is worth more to any community than the money he receives in return. In any case, the money is spent again: it goes in taxes which help to maintain the State and it goes back into all the channels of trade and industry and circulates freely to the general benefit. And then, as far as doctors are concerned, the patient still has freedom of choice. He will always go to the doctor who suits him best.

The medical profession is, of course, essentially international, just as diseases are. One might therefore expect that the world would stand open to the doctor, but the truth is that hardly any other professional man is so limited in his freedom of movement. It is a matter of great difficulty for a doctor to practise in any country but his own. Every country is most jealous of its privileges, and every country protects the interests of its own doctors against foreign intrusion. The methods used are the ordinary ones of trade and commercial interests, and the internationalism of science and knowledge might as well not exist. Here is a field which should not be overlooked when the world settles down to revise and reorganize its international relationships. It badly needs attention; at the moment it is overgrown with the weeds of hypocrisy and narrow self-interest.

An important question like public hygiene—to which the practice of medicine belongs—should not be left to particularist interests. The material well-being of a privileged professional class should not be the only criterion. Bismarck bluntly put medical practitioners into the same class as any other business men. He granted the profession a certain autonomy, but he was not prepared to rely entirely on their sense of justice, and he kept them under strict control. Their university education in Germany was placed under the ordinary Minister for Education. Hygiene and Public Welfare were placed in the hands of

a jurist, not a medical man. There was a commission in Germany whose task it was to regulate the influx of non-German doctors and see to it that the high standards of German medical science were upheld, but on the other hand the Ministry had the right to permit any medical man to practise in Germany over the heads of the faculty and the commission. Thanks to this provision, it was always easily possible to bring in foreign specialists, etc., and thus benefit German medical science. The principle on which the State operated in such matters was the interests of the country as a whole, and not the interests of a privileged professional class.

In England the position is particularly difficult. The medical profession has a very powerful trade union, and it has barricaded itself on all sides against possible invaders. There are one or two loopholes through which some foreign medical men can slip, though it is not always the most worthy who can take advantage of them. There is reciprocity between England and Italy and between England and Japan, so that Italian and Japanese doctors can practise in England without any difficulty And again, oddly enough, the Archbishop of Canterbury has the right to grant permission to any medical man to practise in this country (Lambeth Qualification) provided only that he registers with the General Medical Council. All others who want to practise in the United Kingdom, and are not fortunate enough to avail themselves of these side doors, must first attend a teaching hospital for a course which lasts from one to two years. Even this is not automatic, for these hospitals may reject anyone *in their own discretion, or place his name on a waiting* list. Once the candidate has been accepted at such a hospital and gone through the prescribed course, which embraces practically all the medical disciplines, he comes up before an Examination Board. If he passes, then he can register with the General Medical Council, and after that the Home Office will grant him permission to practise in some part or other of the United Kingdom. With sufficient industry all these barriers may be surmounted within a period of from two to three years.

It must be remembered that all formalities have to be complied with by every foreign medical man (with the exceptions I have mentioned) even if he was at the top of his profession in

his own country and enjoys an international reputation. Any registered doctor in the United Kingdom is forbidden under pain of having his name struck off the General Medical Register to co-operate with or consult any doctor not so registered, the result being that it is theoretically impossible for even the highest foreign authority to be consulted, no matter how urgent the case, and such an authority certainly could not treat the case himself because there is not a doctor throughout the length and breadth of the land who would dare to assist him.

In the year 1910 that is to say about a quarter of a century ago, I was granted permission to practise in the German Reich without a previous examination on the basis of recognized scientific attainments But that was Germany In 1934 and in England there was no other course open to me if I wished to continue practising my profession but to go to school again despite the fact that in the long meantime the tale of my "recognized scientific achievements had lengthened to a not inconsiderable extent. I therefore applied to the Medical School of St George's Hospital to be permitted to pursue the necessary studies. This was granted but when the time came for my examinations I had to go farther afield to Edinburgh and Glasgow

All this sounds rather grotesque, but it was by no means so bad as it sounds. As a student again I made many valuable friendships and got to know the medical life of this country so to speak, from the bottom up and I must say that I was always treated with great courtesy and helpfulness. One thing my new life as a student did show me was my own failings and weaknesses as a teacher and examiner and at the same time the refresher course which covered the whole field of medical studies, taught me quite a lot I did not know and made good much of the damage done by time and tricks of memory Whether the time spent in this way would have been better spent on my own scientific work is another question. However I am not complaining, and I think I made the best of it.

Psychologically I found it both depressing and disturbing to share the nervous anxieties of the student and the inevitable conviction of inferiority though the kindness and consideration of my teachers did much to help me over my troubles. I found that

all the old *examination fever came over me again.* Most of my examiners were young enough to be my pupils, but I met with neither arrogance nor vanity from any of them. But that, of course, was the happy experience which came afterwards be forehand I had all the usual nervousness of the student coming up for his exams, and in my case there was the added anxiety for my prestige in the event of my being floored by this or that question—not to mention the danger of being ploughed altogether And then of course, there was the language handicap. Further the English examination system is based on systematic categorization and on rote knowledge rather than on the ready application of *knowledge. This system places a great premium* on memory A good memory will retain all the formal answers. Mediocrities often have excellent memories, whilst really brilliant men sometimes have poor memories. The results obtained by such a system of examination are therefore of a very hit-and miss nature.

I felt rather sorry for the examiners, and I have no doubt they felt rather sorry for me. In any case they did their duty with understanding and dignity Examiners always work in pairs, and this custom helps to approximate better to a just verdict. Results are summed up by a points system. I have never succeeded in discovering the principle behind it. I take it that the examiners develop a genius for the points system as tea or wine tasters do for their particular tasks. The examiners have a hun dred *points to play with, and somewhere along the scale they* must come to rest. Perhaps their genius is comparable with an absolute sense of pitch. In any case the system works, and that is the great thing After all, there are wine tasters who can de termine not only the vintage year and the place of origin, but even the particular vineyard from which the grapes have been gathered.

Examinations, to my mind, are a painful and depressing ex perience—not to say a humiliating one. The examiner knows that he cannot be absolutely just. He also knows that if the tables were turned the student opposite him might very easily floor him with questions, and he also knows that in the psychological state brought about in the examinee by the whole proceedings it is impossible to obtain a clear picture of what he

really knows and really can. The examiner is rather in the position of a crack machine-gunner in a good trench as the poor wretches come up for the charge he can mow them down in perfect safety—and in this case they can t lob over a grenade or two When a mean spirit is behind the professorial machine gun the result is a sadistic slaughter of the innocent. A base and sadistic character revels in such a situation and enjoys the sight of the poor wretches writhing in front of him. These are the stern examiners. Men of character brains and ability are always mild and understanding examiners They feel sympathy with their victims and are delighted when they can discover favourable points. They do their best to discover and bring out what the candidate knows rather than what he doesn t know

I am not under the impression that I have made any very new or profound observations concerning the problem of examinations. Everyone of intelligence and experience knows perfectly well nowadays that examinations offer no proper measure of any man s ability They are a necessary evil, and we have to make the best of them. However although that recognition is, as I say satisfactorily widespread, there is still a great deal of quietism, and very little effort is being made to bring about an improvement. There are one or two things which might with great benefit be adopted. For one thing, the examiners themselves ought to be under the control of superior examiners. This system of examining the examiners is at the same time a very valuable method of educating younger teachers and examiners. And then, more weight should be placed on common sense and reason on the understanding of the principles involved and on a general understanding rather than on mere rote cramming I think I am right in my experience that it is by no means the really capable and intelligent men who can fill themselves as full of formal knowledge as a sponge and squeeze it out at will. Another important point is that formal knowledge crammed into a student is of little lasting value. Once the examination has been safely circumnavigated most of it evaporates.

Once the student has become a doctor and comes face to face with all the usual problems, there will be a much greater

call on his ambition, conscientiousness and responsibility than on the stuff he learnt by heart when preparing for his exams. What he does not know offhand he will surely make it his business to find out, and his patients will not suffer from the fact that the answer to every possible question is not on the tip of his tongue. Training should be practical and demonstrative The systematic part can be looked up in any hand book, and the patient of the doctor who remembers it is no better off than the patient of the man who has to look it up

I have never been in favour of propounding riddles to examinees. I prefer to put simple facts before them and see what *they* can make of them. And I don t like the painful system of mnemotechnique. In fact, both in written and oral examinations I think that the examinee should be given every opportunity of consulting his books and looking up whatever he needs in order to answer any question. If this is done it gives the examiner a much better idea of the common sense and capacity of the examinee. Above all, it provides information of the greatest possible value, because it shows whether the examinee is really at home in his subject and whether he is capable of using his books intelligently to provide the knowledge he needs. It gives the examiner an excellent opportunity of forming a sound general judgment on the examinee s horizon on the way his mind works and whether faced with a difficult problem to which he does not know the answer offhand, he will be able to settle it for himself by going to the proper sources of knowledge, or whether on the other hand he is likely to make a mess of things as soon as he is faced with a practical problem he does not happen to have met with before and whose solution he has not learnt by heart. In this way it is easy to discover whether the candidate is merely a machine for memorizing words, or whether he has truly grasped the principles behind the words. If in such circumstances a student fails, then the examiners can plough him with a good conscience and the firm conviction that he is not likely to prove an ornament to the profession and a benefit to his patients.

There is no danger that incompetents will slip through more easily in this way On the contrary as things stand it is very easy for the incompetent with an excellent memory to get past

I have seen them doing it. When a candidate uses the word *scalaei* I usually feel quite certain that he made the acquaintance of the subject for the first time the evening before. The glib use of such phrases as "Of course", and "Naturally", and "As is well known" is generally an indication that the examinee heard about it only the day before. But the student who passes the type of examination I propose must really be familiar with his material—even if he can't oblige with a rote answer straight away. I do not, of course, deplore the ready answer and I have no objection to the possession of a generous store of memorized knowledge. Let it be counted in favour of the fortunate candidate by all means. But let no undue importance be attached to it; that is all.

There is often a big difference between the man who knows and the man who can. The man who knows need not necessarily be able to apply his knowledge practically. The man who can does not necessarily know all the details, but he can see the relationship clearly. He knows how to go about the task practically and how to put knowledge to good purpose. The men who can are the great organizers of industry and, in the last resort, of science too. An example of the first type of scientist I would say was Faraday; of the second Marconi. A man like Lord Kelvin combines the advantages of both types. The men who can are likely to occupy the most important posts in our research institutes, because once the problem is formulated their particular ability soon provides the answer. As far as the medical profession is concerned, knowledge must be combined with ability. The two things must be co-ordinated as equally as possible, and therefore medical training should not concentrate on knowledge alone to the extent that it unfortunately still does.

Well, to return to my own affairs, I passed my exams, and having done so successfully I swore that I would never submit to another one—no, not for all the initials in the world. I am quite prepared to conclude my life as a simple M.D. and never see the magic word "Member" or "Fellow" behind my name. In any case, I am already well stocked with qualifications and initials. They will see my time out.

Having happily passed my examinations, I then had to make a start. In that, of course, I had advantages. My name was

already known in the medical world. Thanks to colleagues with whom I had co-operated in this country to diplomats who had consulted me in Berlin and to my many English patients who had come to Berlin to place themselves in my hands, it soon became known that I was in circulation again, and before long my flat became too small for my practice. I trust that I shall not be thought immodest when I say that, in fact, my opening of a practice in London was something of an event. I am not interested in sensations, but the word 'event' is used in this connection with strict propriety From the really sick people to the "lion-hunters who spend their lives collecting specialists, they all streamed into my consulting-rooms, until my main problem came to be how best to dam the stream.

Part of this was, of course, due to the fact that foreign doctors hold a very special fascination for English patients. The European spas, clinics and sanatoria obtained their main contingents from this country Carlsbad Bad Ems, Kissingen, the sanatoria of the Black Forest and Switzerland, Aix les-Bains, Vittel and Vichy were English colonies And now instead of the mountain going to Mahomet, Mahomet went to the mountain. It was therefore, as I have said, something of an event. However in the end I reduced my practice to a comfortable minimum, and the event became a condition.

Thus the situation had changed in the first place the fact that I was a foreigner had been a great disadvantage. It now turned into an advantage, although it also made me the victim of a certain amount of disagreeable professional jealousy but that is of no very great account it is an international phenomenon, and not specifically English.

CHAPTER XVIII

MEDICINE IN ENGLAND

MEDICAL LIFE AND practice in England differs in some respects from the Continent, and it took me some time to get used to new ways. The responsibility the doctor accepts in England when he takes a case is much greater than it is abroad This is quite in

accordance with the general mental attitude of the Englishman, who, if he spends time and money expects results. He is quite prepared to give the doctor and his medicine a fair trial, but if nothing comes of it then that doctor sinks low in his estimation. This attitude on the part of the patient is matched by the attitude of the doctor towards his patient. The English doctor is almost indifferent towards the incurable case or the case which is difficult to cure, and in diagnosis and prognosis he is almost brutally frank. Here I think lies the fundamental difference between the English doctor and his continental colleague. It is this attitude of the English doctor towards his patient which, I think, explains the fact that in his own country his reputation is not as high as it might be.

With his reserved prognosis, his almost sentimental attitude, and his perseverance in the treatment of chronic or hopeless cases, the continental doctor is, I think, at an advantage. If he succeeds, despite the difficulties, in this or that chronic case, then he is sure of the undying gratitude of his patient, but if on the other hand he can make no impression on the case even after prolonged treatment, he may very well find himself an object of hatred and even persecution. The question arises, of course, as to which is the better attitude to adopt. Looked at purely professionally even commercially it certainly seems more advisable, at least safer that the doctor should go no further than the disagreeable facts warrant, and that he should tell the patient, ruthlessly if need be, what he knows and thinks as a doctor In other words, honesty is the best policy and it certainly on the whole, suits the positivist Englishman.

However there are dangers in this attitude, because medicine is not an exact science, and the conclusions drawn by a medical practitioner can rarely be based on absolutely certified facts—except the final conclusion which writes finis to all cases. Otherwise facts are not certain enough to justify adamant conclusions. The medical man can and often does, meet with surprises even when by the very nature of the case it would appear that no further surprises are possible. How often have I heard people say that they had been given up by the medical profession and were nevertheless still alive at—whatever the age may be, eighty if you like. When a doctor has once been incautious

enough to write off a patient's life and then the patient insists on continuing to live as a malicious reproach to the science of medicine, the only thing to do is to take it philosophically as a warning not to jump to conclusions rashly. Medical prognosis is largely a matter of statistics. A sickness is considered dangerous if a lot of people die of it, and not dangerous if only a few die of it. Obviously that is a very rough-and-ready procedure. An additional factor is the constitution of the patient—and the possibility of a mistaken diagnosis.

In all the circumstances, therefore, I hold that not only caution but also optimism is advisable. If a man dies, then there may be a dozen and one reasons to explain the fact, but if he lives on in spite of the doctor's death sentence, then, unfortunately, there is only one generally accepted explanation—the doctor's stupidity. An optimist remarks that the theatre is half full; the pessimist declares that it is half empty. They are both right, but there is an important difference of attitude. There are some doctors whose general outlook is profoundly gloomy and who foresee almost exclusively all the disagreeable developments which may ensue. And there are others who prefer to concentrate more on all the possibilities of recovery. The ones are the meticulous and the anxious; the others are the confident—and the active. The golden mean can be summed up, I feel, in the dictum: think pessimistically and act optimistically. There is then no need to overlook any possibility, either good or bad, and no need to abandon hope or rob the patient of his. A solemn-looking doctor is like a depressant for a sick man, who needs encouragement. A doctor entering a sick room should bring confidence and hope with him. A cheerful manner—I don't mean a frivolous one—is much better than an assumption of solemn importance, and as good as a tonic, and that is just what every patient needs.

I remember a case—I grant you it was an extreme one—of a susceptible young girl who was suffering from nothing worse than inflammation of the throat. I was making the rounds as assistant to the clinical specialist, Professor Kéthy. We paused at the girl's bedside and my instructor delivered a lecture with solemn face and sepulchral voice, of which the patient, of course, could understand nothing. We had just moved on to the next

unfortunate when the girl sprang out of bed rushed to the window and tried to throw herself out. By good fortune she was prevented The ward of course, was in an uproar and when we got the poor thing back into bed and began to investigate the reason for her extraordinary action, we discovered that she had been frightened by the gloomy expression on the face of the Herr Professor and thought that her case must be quite hopeless, so she decided to end it all. At that even the Herr Professor permitted himself to smile soothingly

Naturally even this smiling face business can be overdone, and there are even circumstances in which it is not advisable. Some patients need to be pitied and they get very upset if the doctor fails to take them and their unique case with proper seriousness And there is also the type of patient who greets you with the words I m sorry to say I feel much better to-day doctor" However generally speaking, in serious cases and in cases of relapse it is better not to tell the patient anything which might make him feel worse. No one wants to hear that he is worse it makes him worse than ever Even if a patient demands to know the truth, that does not always mean that he really wants to hear it. No man likes to be told that the limit of his days is at hand and generally speaking a patient should not be told that he is going to die, or that his case is hopeless. In all my long experience there have been very few cases indeed when I have felt it necessary to suggest the Viaticum. No one has learnt from my lips that he was about to die And no doctor should, in my opinion advise a patient to make his will. Things of that sort can reasonably be left to those around the patient The doctor should be a source of hope—last hope perhaps, but certainly not a judge pronouncing sentence of death.

Even with incurable cases it is better to adopt a hopeful perspective. There is nothing selfish about this, for the patient will die in the end and then the doctor stands there refuted by death, but at least time has probably been won for the patient in which he can get used to his misery and alter his attitude and his demands on life. If a doctor is frank about the approach of death he may increase his own credit when death supervenes, but he has not helped the patient s mental state. Personally I would sooner that my judgment was doubted than my heart

So much for my opinion I am well aware that there is some thing to be said for the other side. Doctors must choose for themselves. It is not the sort of thing that can be put to a vote, because I know that the vote in favour of frankness would be overwhelming—people feel like that when they are well, but I have never known a sick man who wasn t grateful for a com forting lie.

Nothing confirms my standpoint more than my experience with sick doctors. Doctors are the simplest patients of all to look after—and the most credulous. The consoling poppycock I have retailed to the innumerable doctors who have consulted me I would hardly have dared to set before an intelligent farm labourer But on one occasion at least I didn t come off best. A famous colleague developed locomotor ataxy with all the symptoms and all the complications set down in any text book. It was a perfectly clear case—classic, in fact—and I treated him for fifteen years. For every symptom I had a consoling diagnosis —of course, I need hardly say that this consolatory swindling makes no difference whatever to the real diagnosis and the corresponding treatment In the end my poor friend developed an infection of his paralysed bladder and died of it. Shortly before his death, when he quite obviously knew that he was about to die, he said to me "My dear old János, thanks for all you ve done for me, and thanks in particular for your really moving efforts to deceive me as to the seriousness of my con dition. I knew perfectly well all the time what the real situation was, but you were so good to me that I hadn t the heart to un deceive you" Well, there I stood the deceived deceiver But was I really so wrong in my attitude, even in that case?

I have admitted already that the attitude of English doctors—the frank, if necessary ruthlessly frank, attitude—is probably the more suitable one for the English mentality but when I came here I was already too old to alter my ways, particularly as my own attitude towards patients derives naturally from my own character and make-up In all other purely medical ways I have changed wherever I thought it desirable.

My experience of English patients has been a happy one. The Englishman *is a good patient*. If he *consults* you and agrees to accept your advice you can be quite certain that he will do pre-

cisely what you tell him to do The incidence and the course of various sicknesses vary of course, from country to country and they are different in England to what they are in Central Europe, for instance. Digestive troubles, endocrinal gland disturbances, allergic sicknesses in the form of asthma, colitis and liver complaints, catarrhal disorders like rheumatism, fibrositis, neuralgia, herpes (shingles), nasal catarrh, sinus trouble, organic nerve troubles, arrested development of all kinds speech impediments, etc.—all these complaints are more frequent in England than in Central Europe and of greater severity On the other hand, certain complaints, such as arteriosclerosis, take on milder forms here and their consequences are less serious Otherwise I don t know that one can speak of any fundamental differences between medicine here and on the Continent. I have learnt new methods and heard opinions here which are unknown on the Continent, and on the other hand I have been able to acquaint colleagues here with things which were unknown to them. This is always the case, and it is the strongest argument for the widest possible organization of an exchange of know ledge as between one country and the other The State should undertake the beneficent task and put an end to the scientific and professional jealousy which still hampers its performance.

I am not suggesting that foreign doctors know better than their English colleagues but in many respects their methods are different, and some of them are better At the same time the continental doctor whilst giving would also receive. Both parties would have an excellent opportunity of revising and re-judging their own methods. It would work equally both ways, and both sides would gain nothing but advantage from it. I know of course, that medical journals and international con gresses encourage this exchange of knowledge, and that is all to the good, but they do not satisfactorily bring about the exchange I have in mind, they do not really represent an internationalization of medicine, and that is what is required. In addition, economically speaking it is better to import teachers from abroad rather than send students to spend years studying abroad, and that is the same for all countries. It is not done to-day to the extent it should be, largely on account of nationalistic obscurantism and petty jealousy

To appeal to the national heroes of medicine as proof that this country need not be ashamed of its general level of medical knowledge is entirely beside the point. No one would deny for a moment that the English genius has flowered on this field as on so many others The history of medicine could not be written without such names as Harvey Jenner Stokes, Addison, Hunter Starling Hopkins and Haldane, and, indeed, many others, though, of course, other countries have contributed equally great men to the general cause of medical and scientific knowledge. Science is of its very nature international, and it will always be so No benefit can come from erecting artificial barriers as between country and country where scientific knowledge and practice are concerned. Humanitarian and scientific interests alone should guide scientists, and never narrow materialistic and nationalistic motives.

I can hardly imagine that in revising their status medical men would be content to see their profession degraded into a business. If that is done, then it will undermine the special ethical position of the profession of medicine, over which the various councils and boards watch so jealously And if the medical profession is made into a business, then it would obviously be unfair to grant it any privileges beyond those granted to any other business, and the usual business methods would have to be permitted such as advertising, etc. Doctors must choose between ethics and business they can t have it both ways.

We want no commercialization of the medical profession, but on the other hand it is a hypocritical sham-ethic which prevents a doctor from enjoying the material fruits of his discoveries and taking the just return for what is invariably long and hard work. No other profession sees anything unethical in its members receiving material rewards for the products of their genius. It is a distinct hardship for doctors that medicines cannot be patented only the process of manufacture and the name can be protected There may be something to be said for that from the ethical point of view because naturally it would be wrong to withhold medicine under a legalistic pretext from anyone who needed it. But at the same time to deprive the doctor of the proper reward of his effort, and leave the profits to the shareholders who do nothing for suffering humanity beyond putting

the medicine on the market and that greatly to their own profit, is sham ethics.

The highly moral guardians of medical ethics can be big shareholders in a crematorium or in a factory for the manufacture of explosives without arousing any comment. For my part, I chose the middle way. For my invention of "Theominal" I took nothing for myself and the share which was allotted to me I contributed to a foundation for poor students. I was certainly not prepared to see the money go into the pockets of the shareholders. There is no doubt that this false principle of *lucrum cessans* for the inventor to the benefit of the imitators and distributors has resulted in a certain sterility in the production of medicaments.

Whilst working with my friend Eichelbaum in the Zuntz Laboratories I saw an example of how encouraging material incentive can be. Eichelbaum lived by making analyses on a mass scale for other people. His tariff was low and it was the mass that did it. On one occasion he had to produce cellulose from a certain material at the same time freeing it from albumen. After the separation of the albumen the required cellulose was left. It so happened that Eichelbaum caught a very bad cold at the time, and had to go to bed with a high fever. In his delirium he got the idea that the laboratory servant Beutner had flung away the cellulose obtained with such difficulty and kept the undesirable albumen. God granted it to him in his sleep! It was the loss of his honorarium that worried him more than the failure of the experiment. When he recovered, he remembered his delirium fantasy and began to think over the matter and saw the great nutritive possibilities contained in the dissolved albumen. He sold the idea and the details of his process to the chemical firm of Bayer in Elberfeld for 100 000 marks and a subsequent partnership. That is the behind-the-scenes story of the first manufactured concentrated foodstuff, which was called Somatose. It was the beginning of a new big industry—the concentrated food industry which had a huge annual turnover in Germany and a still bigger one in England.

Are the discoverers of things of such tremendous importance for economics and industry to be excluded from any share in the benefits? That would be both senseless and unjust. One of the

rewards of a thing well done may be, as Emerson says, to have done it, but it shouldn't be the only one at least, not in such circumstances. This whole question of what I have termed sham ethics in the medical profession needs re-examination. Should there really be any special ethics for the medical profession at all? The fundamental ethics of the medical profession are the same as those of any other profession. The doctor must be a decent citizen performing his task to the best of his ability and, of course, retaining such personal secrets as the exercise of his profession may reveal to him. But why all this solemn swearing of oaths on the point? Does a bootmaker need to swear to make good boots? Does a tax inspector or a bank clerk have to swear that he will reveal no professional secrets? If they do so they are punished, and there is no necessity for any further sanctions against the doctor who similarly offends.

I feel that the whole thing comes from a disparaging estimate of the medical profession rather than otherwise. Decorations, titles, distinctions and qualifications are certainly valuable they make it easier for social intercourse to function. They indicate that the private life and repute of the person in possession of the titles, etc., have been thoroughly gone into, and that the individual is thus *prima facie* worthy of trust, but it gives no indication whatever that the man not in possession of such positive stigmata" is not equally reliable and trustworthy I am in favour of distinctions, but not of privileges. They are a source of injustice and irritation and they encourage professional obscurantism. I am firmly convinced that if the hippocratic hypocritic ethics *of the* medical profession were abandoned in favour of lining up the doctor in the ordinary way in the ranks of any other community of decent men and women the result would be nothing but gain all round. Voluntary and inborn decency is more effective than anything which can be obtained by compulsion.

Quite generally the medical profession carts around too much ballast. The most powerful medicament of antiquity and of the middle ages was belief, confidence. The first doctors were priests, and they sought to raise the esteem in which they were held by all sorts of religious hocus-pocus, and to increase the awe in which they already stood as the earthly representatives

of the God or Gods. To insist on the derivation of modern medicine from Hippocrates is a medieval fiction. There is no shadow of a proof that we have received anything positive from him. He was born as far as we know, in the year 460 B.C., on the island of Cos. Later on Alexandrine medicine credited him with all sorts of marvels, and a so-called Hippocratic Collection was established and this was made legendary by Celsus in the Augustinian era and by Galen in the second century after Christ. All that we can learn from the "Hippocratic Collection" is a certain experience, and that is often falsified by deliberate interpretation. To regard this hodge-podge of nonsense as a guiding principle for modern medicine is nothing but a frivolous flirtation with antiquity If we considered modern medicine apart from all this hippocretinism, we should find not the slightest gap either in medical knowledge or in the practical ethics of the medical profession

In the middle ages the medical profession if such it could then be called, was surrounded with a deliberate cloak of mysticism. Its mixtures were prepared to the accompaniment of all sorts of incantations and ceremonies with a view to making the resulting medicament more effective. At the same time everything possible was done to keep the unfortunate patient in ignorance and to encourage his superstitious reverence for the mumbo-jumbo The ignorance of the medicine man was concealed behind a wall of silence even the most indifferent matters were carefully concealed from the patient. Cabbalistic incantations were in common use to add to the general air of mystery and mysticism. And even when light began to penetrate into this ignorant darkness, and the incantation swindle had to disappear the profession still maintained what may be termed a secret language—a sort of medical cant which is still predominant to-day A dead language, Latin was used as the least likely to be understood by patients, and with it all sorts of mysterious signs equally incomprehensible to the layman. And to crown it all and make certain double sure an indecipherable hand became the convention in the medical profession, and it is so down to this day

In my opinion the time has come for all this traditional secrecy to be thrown overboard as unworthy of a dignified pro-

lesson. Why should a patient not be permitted to know exactly what the doctor proposes to dose him with? Why should he not be able to read it clearly on the box or bottle, written in his own tongue? The old riddle-me-ree form of prescription to the apothecary should now be replaced by perfectly straightforward and clearly written instructions. In any case, the Latin knowledge of ninety-nine out of a hundred doctors wouldn't give them a third form pass-out, and they might just as well use Egyptian hieroglyphs. They know no more than the routine scribble, and if anything out of the ordinary is required they are sunk. Even the genitive form is beyond them, and so it is left off by shortening.

I think it would be a good idea if every bottle and every box of medicine ordered by a doctor were provided with a second copy of the prescription, written of course in plain language and in plain writing. This would not only provide a check on whether the prescription had been properly interpreted by the chemist, but it would also help the doctor's memory if any query arose after say a few weeks concerning its composition. In short, it is greater frankness and less secrecy we require. The science and practice of medicine to-day is far enough advanced to be worthy of *respect. There is no need for secrecy*, no need to pretend that we know everything. We ought to have courage enough to admit frankly what we don't yet know.

And the solemn theatricality of so many doctors' 'visits'! Too many of them still go about their business as though they were on their way by special invitation to the Royal Enclosure at Ascot. One suspects that they have to rely on a borrowed dignity and fear that to drop their formal guard for a moment might result in damage to their reputation.

In my opinion the institution of charity hospitals such as it exists in this country is an unworthy one. It is the duty of the State to see that its sick citizens receive the medical care and attention they require. It is their right, not a matter of charity. I like to live my life on my rights, and not on the charity of others, and no fellow citizen should be forced into that disagreeable position. Further, any hospital institution which must rely on charity is liable to get into the hands of a clique. The clique need not necessarily be a bad one, and in a highly organized

country like this the system does function, but nevertheless a State council or urban-controlled institution with proper medical men in charge is much to be preferred to one which is under the control of ambitious if ever so well meaning amateurs.

The worst evil of the present system is that future generations of doctors receive their training in schools attached to such charity hospitals administered by charity boards with honorary members. The teaching bodies are also made up for the most part of former pupils of these schools The science of medicine is developing rapidly and any factor which tends to sluggishness, as this system does, should be removed. Its chief evil is nepotism. Nepotism is always bad, but it is particularly so in a teaching body where only personality and knowledge should count. The final decision as to who should educate the medical youth should be in the hands of an impartial and expert body In a parliamentary democratic State this decision should lie in the hands of a Ministry for Education and Public Hygiene.

All this seems doubly important with regard to a corporation which tends to subordinate its objectivity to its *esprit de corps*. The Royal Colleges of Physicians and Surgeons have been called colleges for mutual admiration and there is more than a little truth in the gibe. They are very sensitive towards the least threat that their comfortable harmony might be disturbed by energetic strangers. No serious reformer would dream of threatening the honourable traditions of such institutions and they have done much to preserve the fine traditions of the old giants of medicine for each succeeding generation but tradition must not stand in the way of new blood and new ideas Worth, and not narrow mindedness, should be supreme in science. Hundreds of medical students emigrate every year from this country to go to foreign institutions of learning, but only very few foreign teachers find an opportunity for teaching in this country Opportunities are being constantly missed, to the detriment of the community thanks to the lack of a central controlling body

Let us now turn to the much-disputed problem of the costs of medical treatment. It plays a great and important role. There is an old saying that if you treat for nothing your work goes for nothing, and there is something in it. Non-paying patients are

incurable patients—that is to say you never get rid of them. Naturally I am *not referring here to panel-scheme patients*, and every doctor will know what I mean. Not that I want to lay down any hard-and-fast rules or set up any irrefragable principles. The best principle is perhaps not to have any hard and-fast principles. According to Bismarck it was only the man who was too lazy to think for himself who needed principles as a crutch to help him along A man leading a fruitful life can generally speaking do without them, but society generally can not, because a social being must necessarily adapt himself to others. A distant similarity can be observed in the medical profession considered as a bread-and butter matter which, of course, it is also. The problem is a difficult one, and it has never been satisfactorily solved. I refer to the question of medical fees

There is no invariably reliable key Most doctors do their best to be fair to their patients whilst not robbing themselves, but the whole question remains in an unsatisfactory state. The famous surgeon Kerr of Halberstadt always requested his patients to present their income tax assessment, and he would then fix his fee for the operation at 10 per cent. of the total. But of course, in operations and deliveries the thing is much simpler and what the doctor performs is clear and visible, and the success obvious. But for an ordinary practitioner who can guarantee no results of any kind for his pains the only approximate method is to judge the time involved and then to fix the fee according to a settled tariff. We are faced with a wall of convention to make things more difficult. It is easier and quicker and it requires less knowledge, to perform an operation for appendicitis than to make a responsible diagnosis and follow it up with appropriate treatment, but although a patient is quite prepared to pay a considerable fee for the operation, he doesn t feel the same way at all about a practitioner's fee which is no higher for a long course of treatment.

In Russia doctors used to leave it to the generosity and gratitude of their patients, and I believe they did quite well out of it, but although one can well imagine that the character and way of life of the old Russian aristocracy and educated middle classes, with their almost legendary generosity made the system

work quite well there, it would undoubtedly lead in next to no time to the complete bankruptcy of the medical profession in the Argentine, for instance. And I can't imagine its working very well in any Western European country so that won't do either Another method sometimes adopted is the indiscriminate payment in advance for a consultation (very much like buying a ticket for the theatre) but that favours the well-to-do at the expense of their less-wealthy brethren. In addition, payment in advance suggests in ordinary business relations some sort of a promise of results and what doctor can honestly agree to that? And now we have arrived back at where we were in the beginning: it is an insoluble problem. Either we must leave things more or less as they are, or agree to the nationalization of the medical profession

As far as the medical profession is concerned, I feel that although it would protest vigorously it would in the end accept the nationalization proposal, but in that case I am afraid the future of the medical profession would suffer I believe that the thing which attracts men into the profession more than any other is the prospect of independence it offers. The medical profession is in some respects similar to the profession of arts—perhaps that is why one finds so much artistic ability and so much love of the arts amongst medical men. Another thing for a man of ambition is that his future prospects are unlimited. There is no reason why he should not climb to the top of the tree. He is judged by the public according to his personal capacities And finally he hopes for the right to take such patients as suit him and to reject those who do not. And then, again, from time to time he can take what holidays he pleases. In the best case he has the hope of a very large income, and in any case he will be assured of a reasonable one on which he can live comfortably And finally though not least important, there is his interest in sick people and in the medical science of curing their ills.

Now if nationalization abolishes most of these attractions, we shall have a body of medical officials rather than a body of doctors, and even then the inflow will be limited because, in view of the changed prospects of the profession, the time and money necessary to become a doctor will be better placed else-

where. I don't want to tread on anyone's toes, but in my opinion the army medical corps and, generally official doctors demonstrate more or less what sort of a medical body we are likely to get from nationalizaton and what we may expect from it in the way of scientific advancement. I am well aware that my opinion will not be generally popular because at first glance the nationalization of the medical profession seems to offer a greater opportunity of securing social justice in medical treatment than is available at present. No doubt nationalization would work up to a point, but I am convinced that after about twenty years of it any country would be heartily glad to go back to the old system and free the medical profession again. But then another twenty years would be needed to make good the damage done to public health and hygiene and fill up the profession again with good men.

Let us look at the question from the standpoint of the patient, and I think the argument against nationalization is still more cogent. It is generally admitted that the most important factor in the success of any treatment is the confidence of the patient. That is therefore not the point at issue. The point is, does that confidence contribute to the success to the extent of 92 per cent. or only 73·2 per cent.? Every doctor will do his best to win his patient's confidence, both by his personality and his knowledge —to build up his practice if for no other reason. Now 90 per cent. of the work in any profession is sedative and only 10 per cent. really keeps the interest alive and active, and the same is true of the medical profession, but where doctors are concerned another and very important factor comes into play a doctor's interest in his profession is kept 100 per cent. alive by his ambition to become a popular that is to say a sought-after doctor and thereby (let us have no hypocritical pseudo-modesty) increase his income. But once the medical profession is nationalized and the doctor is nothing more than a State official, I can well imagine that he would prefer to have fewer patients for the same income, and that his ambition if such it can be called, would be directed towards reducing his practice, until finally he arrives at the happy state where there were no patients left at all to interfere with his peace

Let me admit right away that this picture has been painted

in rather exaggerated colours, and that, in fact, the natural love of his profession which inspires most medical men would do something to ameliorate the worst disadvantages. A doctor's love of his profession usually remains with him to the grave, but although that is true it is also true that a man needs success in life as much as he needs air to breathe. Life is frankly a battle for success professionally socially sexually, in sports and pastimes and finally when we advance greatly in years, to secure ordinary regular physical elimination by way of bowel evacuation. Gallen has assured us that success in this respect is in itself quite enough to make a man happy in the third period of his life. However the most common measure of success in our society is the earning of a satisfactory amount of money I say satisfactory but in fact, the urge never ceases and we see rich men—millionaires many of them—who never lose the urge to make money The drive for pecuniary as well as professional success stimulates the doctor to increased effort as it stimulates every other man. It is not the possession of money in itself which is the important thing the miser is a rare anomaly whereas generally speaking doctors are lovers of life. No money is the evident sign of an appreciation of their work. You can call that human weakness if you like, but humanity is inconceivable without its weaknesses, of which, naturally doctors have their fair share. It is a point which should therefore not be overlooked in any attempt to revise the status of the medical profession It is unfortunate, I think, that in vital questions of this sort so many men haven t courage enough, or are too ashamed, to own up to their possession of a common weakness

What are the qualities which a doctor must have if he is to be successful in his practice? A really famous doctor is as rare as a really famous prima donna. If she is beautiful, then she can afford to have a figure which is not perfect. If she can sing, then she can afford to be ugly If she has exceptionally beautiful legs, then it doesn t matter if her nose is not all it might be. Only once in a blue moon is a being born in full possession of all the attributes which go to perfection. And the same is true of the great doctor He must be of good and agreeable appearance, he must be well educated he must be cultured, he must

be clever he must have good manners, and, of course, he must know a thing or two about his job But if a doctor has real personality he can do without almost all the rest. A doctor must have something which raises him above the others in some way or the other Every outstanding difference with a personality behind it will find its own following A doctor with a long and unusual beard, another one with a distinguished elegance of manner another one with an abrupt character or one who is something of a fop—I have known representatives of all these various peculiarities who were successful medical men. In short, it is true to say that every doctor who is successful owes it to his own personality The success must silence all criticism. There are some doctors who give confidence purely by their appearance and are able to work wonders. Charcot is said to have been such a doctor The strongest personality I ever knew amongst doctors was Leyden. When he entered a ward every face lighted up. The most obstinate hysterical troubles disappeared by magic as soon as he placed his hand on the fore head of the patient. In consequence he was worshipped by his patients—and dubbed a charlatan by some of his colleagues. However that did no damage to his reputation amongst the general public, because they have a facility for seeing through mere professional jealousy and when they do then the more their hero is attacked the more they worship him.

Professional jealousy is common to all walks of life, and doctors have no monopoly of it In the case of the doctor the rivalry develops from an irritation of that self-confidence which is so necessary to the exercise of his profession. Put two fighting cocks in a pit together as used to be done for sport in this country and still is in Spain and some other parts, and they go for each other at once and for no particular reason. Similarly for a doctor the mere sight of a rival practising is quite enough to irritate him and produce choleric feelings. It is so even though many would not admit it, but in the last resort it does little harm, for your doctor is a disciplined member of society and its chief effect is to spur him on to greater achievement in his own practice.

CHAPTER XIX

THE MEDICAL MAN IN ENGLAND

One of the things which has struck me as most extraordinary during my stay in this country is the social status of the medical man so much so in fact, that although I am mindful of Oscar Wilde's warning (A little sincerity is a dangerous thing and a great deal of it is absolutely fatal) I nevertheless feel that the unprejudiced observations of an intelligent outsider could be heard with benefit—I hope, of course, to avoid the fatality

Balanced as it is between the moral aspect and the professional aspect I feel that the medical calling is always likely to occupy an exceptional position in society but the Englishman does not care for ambiguity in social matters it is a source of embarrassment and discomfort. He likes to know definitely where a man belongs. In the case of the medical man he arrives at some sort of clarity by a rather summary judgment which strikes me as extremely unfair He still regards the doctor as a sort of barber a *tradesman*. The doctor earns his money directly but the essence of social caste in England is to earn it indirectly The more indirectly a man earns his money (and the more he earns of it, of course) the higher he stands in the social hierarchy To sell things over the counter stamps a man as no gentleman, but to let someone else sell them over the counter for him is quite all right One can then be a Woolworth.

Science including medical science, has no place in the drawing room. The doctor is something like the artist The artist belongs on the platform in the concert hall, or at the Burlington Gallery—not at the exclusive dinner table. In this respect the literary man is to some extent an exception. He can tickle one's vanity—or be a dangerous enemy The Court the Upper House, the House of Commons even, the Guards of course, the City (with reservations), the Civil Service particularly the Foreign Office, and an episcopal dignitary to say grace at table, the County families, and there you are. But unless you're a branch, a twig or even a leaf of the recognised tree, you are lucky—and you ought to feel honoured—if you are occasionally

permitted to be present to alleviate, if ever so little, the chronic boredom of society In short, the social position of the medical man in English society is a dubious one, and quite definitely the social position of his continental colleague is considerably higher

I am a little prone to exaggeration when I want to make a point clear and the comparison I am about to make should be taken with the usual pinch of salt to taste, but I consider that the state of affairs in England to-day with regard to artists and medical men is similar to that which prevailed in Austria round about the year 1800 when, after society had dined, the musicians were allowed to enter much like well-trained domestic animals and entertain the guests. A Haydn, a Mozart a Beethoven and a Schubert were permitted to make their bows to their social betters in this way—after of course, they had been fed with the domestic personnel. Rousseau in France has told us in his memoirs how he had to feed with the staff before entering the drawing-room, and on one occasion at least we know that Beethoven rushed out of Schloss Graetz without his hat and stormed for miles, as far as Troppau in fact, in a fury of rage at the humiliation to which his proud spirit had been subjected. The grandson of this same Lichnowsky of Schloss Graetz was the German Ambassador to this country before the first world war a man of great culture and, naturally of a very different attitude towards the arts and artists. Things, in short, are not so bad to-day—even in England. Many Englishmen have assured me that 'things are improving"

Indeed from fifth Barons upwards they are for then one is socially elevated enough even to snub the snobs. Things are different amongst the newer aristocratic families Their position is not yet sufficiently established They are not sufficiently elevated themselves, and have not been so long enough, for all they do to be right. They have to think twice before hob-nobbing with their doctors who are, after all, only a cut above hairdressers. And this attitude does not come from a feeling that the man who knows their bodily ailments—and very often the troubles of their souls—is not a suitable person for mate friend it comes from the social consideration other guests. The strict caste organization of " ' 1

lived longer and is better preserved in England than in any other country The word snob comes, according to one version, from *s(ine) nob(ilitate)* but whether this is so or not, it is certainly true that aristocratic snobbery and caste arrogance often takes on grotesque forms. It is even said on very good authority that certain members of the oldest aristocratic families absented themselves from the coronations of the House of Windsor on the ground that its aristocratic pretensions were of altogether too modern an origin.

On one occasion a fourth Baronet, the owner of a big steel works, left my consulting room and was observed by my next patient, a ninth Baronet, whose money came from coal. When he came into me he observed disparagingly I didn t know that ironmonger was a patient of yours

On the Continent the scientist, including the medical man, could climb the highest rungs of the social ladder as a matter of right. It is not so in this country Once when I was in London long before the first world war I was at dinner with the German Ambassador Stahmer Amongst the guests was an English scholar of some renown. He was obviously ill at ease, and he apologized frankly for being gauche, declaring that it was the time in his life he had dined with an Ambassador

I have the impression that the medical men of this country are beginning to feel their unfair social treatment. A regular army officer makes material sacrifices in the interests of his profession and accepts its modest rewards, but in return, at least, he enjoys a compensatory social position and the same should be true of the doctor who should not have to trail along behind the City man. Something can be done in this respect by the doctors themselves by encouraging a greater professional pride. Some day this social injustice will be rectified, but so far it is not thought proper even to talk about the embarrassing situation. The matter is ignored with dignity—and can be felt bitterly for a lifetime. It wouldn t matter so much if it were not for the fact that doctors' wives, and in particular their daughters, suffer from it.

The conspiracy of silence is partly due to the fact that each doctor likes to pretend that he personally is better treated socially than his colleague. In any case, when plans for the

future status of the medical profession are under discussion this particular abuse should not be treated lightly The question of recruitment to the profession is partly dependent on the social status of the medical man. The so-called better families rarely let their sons become doctors and when they do the sons usually become biologists or theoreticians of some sort or the other and rarely practitioners. In consequence, the medical profession is largely recruited from the less prosperous middle class, whose social outlook and characteristics are different from those of the upper social strata, so that there is an obstacle to easy inter course. A semi proletarian origin has many advantages—a cer tain freshness of spirit, for one thing—but it also has disad-vantages, and one of them is the general atmosphere it creates. It is wrong to make the caste system entirely responsible for the trouble. There is a natural gap, and it must be bridged, or better still, filled in That will finally come about when social justice abolishes class divisions altogether

For one thing science must be popularized on a much wider scale, though, most certainly the medical profession must not be turned into a sort of artisans guild. At present modern sur gery as represented in the Royal College of Barbers and Sur geons enjoys a medieval reputation as a worthy but hardly scientific, professional guild. Its members are honest and quite respectable, but not socially acceptable. To-day there are still certain houses and certain districts which are, so to speak, out of bounds for doctors. Whole districts of London are barred to doctors whilst in other districts they practise on top of each other Perhaps this explains in part the grotesque situation in much-lauded Harley Street. No one is really quite sure whether the doctors in Harley Street give the place its reputation, or whether the street gives them theirs. In any case, almost every doctor who has pitched his tent there after the public, or science, or himself has appointed him consiliarius, has his own tariff. "Harley Street Doctor" is a cachet it carries with it the nimbus of absolute authority so much so that many patients hardly think of the name of the doctor but only of the corpora tive idea of "Harley Street Doctor just as one speaks of a Saville Row Tailor

I think I have sufficient experience and knowledge to p

myself to judge between the doctors of various nationalities, and I can say quite definitely that everything I have seen suggests that English doctors in no way lag behind their continental colleagues. In fact in some respects their fund of school knowledge exceeds that of the continental doctor. Knowing the high qualities of the English doctor I have often wondered how it came about that quite broad sections of the British public feel a certain mistrust towards their doctor compatriots, and I have never found a really satisfactory explanation. The mistrust is certainly unjustified. The foreign doctor who practises here is favoured by this mistrust felt by so many otherwise patriotic Englishmen. It causes them to think more highly of foreign art and foreign medicine. It is possible that in the medical disciplines which demand diagnostic and therapeutic fantasy the continental doctor has an advantage over his English colleague, but that is quite compensated for in the more positive medical disciplines, such as surgery, gynaecology, bacteriology, etc., in which English doctors are in the lead. And as technicians they are unsurpassed.

Their training is on the whole better than the average continental training. As I have indicated, it is rather more practical than theoretical. On the Continent the University has the privilege of training the coming medical generations, and the material at its disposal is restricted. The tremendously valuable material to hand in the public hospitals is practically unused for training purposes, whereas in this country the medical schools are usually attached to the big hospitals with all their wealth of opportunity for study. Together with the universities, these schools provide specialized training for doctors after they have taken their ordinary degrees, whilst for special research there are various institutes with absolutely first-class teaching staffs.

From my general experience in various parts of the world I should say it was easiest in England to obtain the qualifications permitting the individual to succeed with comparatively modest industry and talent. On the other hand, there is no other country in the world where real zeal for learning is more encouraged than in England or where there are greater opportunities for learning. In short, as I see it, England is a Dorado for both the less and more talented and industrious students.

If there is any criticism I have to make of the English system of medical training it is that the individual teaching institutions enjoy unlimited autonomy and that the central State institutions take no heed of their inner structure. As a result of this circumstance the possibilities of refreshing and interchanging teaching personnel are too limited. Each teaching body represents something like a phalanx against intruders. That may be of importance for the preservation of tradition, but it excludes the healthy factor of competition and inhibits the free play of forces. In England when a man begins his activities at one institution he usually ends them there. The system has its advantages, but it is not very fruitful These problems, of course, require far closer attention than I have been able to give them here, and what I have written is intended as no more than a general sketch. It is interesting, incidentally to note that the teaching system in Scotland is quite different the system there is more closely related to that which prevails on the Continent. It is perhaps not for nothing that Edinburgh enjoys the highest reputation of all the medical teaching centres in the United Kingdom.

As a foreigner I have perhaps been rash to criticize at all, but I am comforted by my knowledge that in England even the criticized do not lose their sense of humour and proportion. The English are, on the whole, a critical people, and no one criticizes them more sharply than they do themselves. For the foreigner used to other things, they criticize each other with a forthrightness and even rudeness unthinkable on the Continent, and they don t take criticism of themselves in bad part, though I should warn outsiders against indulging in it in the same hearty fashion. It is very much as though someone after communion with himself had come to the conclusion that he had been wrong and then observed frankly "Well I really was an ass" Whereas if any one else told him he had been an ass he wouldn t much care for it.

I am therefore a little doubtful of my own critical daring Not that I am accusing anyone of being or having been an ass, or that I have made odious comparisons with the imputation that other people do it so much better If anyone has received that impression then let me apologize at once that was far

my intention. The English were happy on their island before I arrived and I am not immodest enough to suppose that they would feel any loss if I departed, which, incidentally I have no intention of doing—except in the way of all flesh. However I feel that it is not only a man's right, but even his duty to give advice to those around him, particularly to his friends, when he feels that he has anything of value to say In my case the point of departure for any criticism is my conviction that this is the finest country in the world, and that there is no other at the same advanced stage of development. I feel proud to account myself by choice and adoption a member of such a community

This is the true spirit of criticism as a duty and not as an expression of dissatisfaction. Criticism is the application of knowledge and experience. I am well aware that limited mentalities are quick to retort to the foreign critic "Nobody asked you to come here. If you don't like it go back to where you came from. But I do like it, though that doesn't mean to say that even in the most favoured country there is nothing that could be improved. I have therefore refused to let myself be silenced by the usual smug phrase In this country we " It is unworthy of the English character anyway It means more or less 'You Ashanti nigger yesterday you were up a tree dropping coconuts. Shut up No there are some things which still persist in this country despite the fact that they are not on a level with the national genius. I have felt that to point out one or two is a good deed—even for a foreigner provided the spirit of the criticism is constructive and the intention helpful.

CHAPTER XX

AND FINALLY THE ENGLISHMAN

It is obviously a comparatively easy matter to rule over masses of people who show no very great interest in questions of the day The masses of the people in England pay comparatively little attention to things they cannot determine themselves, and they are prepared to leave them in the hands of the authorities with some confidence. Even the greatest cataclysm

in human history seems to have impressed its significance on relatively few people. They are unwilling to interfere in matters which seem outside their province. A shrug of the shoulders and a brief "*It's not my job" is the usual reaction.* They rely on the specialists and the experts to attend to the matter—and, I must say it works quite well that way

There are few countries in which authority even authoritarianism, plays such a role as in this country though it is a voluntarily accepted authority and not one imposed by force from above, and that makes all the difference. It is incumbent on a well-bred man to accept much of what is set before him without complaint. What he doesn't know about doesn't trouble him unduly and unfortunately with an average education there is so little he does know With such a widespread lack of interest it is easy to discipline a people. At the same time it ensures peace of mind and almost happiness. Leisure can then be devoted to the pleasures of life, and society is little disturbed by violent differences of opinion. Even fundamental problems of social existence can count on very little public attention, but the fate of a half-starved cat or a badly treated dog can raise a storm of feeling That is quite touching, but at the same time it gives rise to some misgiving

The Englishman is not a great reader His newspapers are printed in enormous editions daily and give him information painlessly by text and by pictures. Newspapers with an intellectual appeal, the small band headed by *The Times*, account for only a very small proportion of the huge volume of journalistic production. And even the intellectual usually limits his interest in questions of the day to his week-end reading, to the Sunday newspapers, the weeklies, the reviews and the monthlies.

In the European–continental sense the school aims at awakening the interest of the pupil in historical and natural happenings—at giving so to speak, a typical cross-cut of human knowledge, and enlarging the horizon. Its task is thus diffused rather than concentrated I have wondered whether the lack of schooling in England has a deleterious effect on life in general, but I have come to the conclusion that generally speaking it does not. In any case, appearances are often deceptive here too. The Englishman seems to have less desire to communicate with his

fellows than is the case with the Continent example of *homo sapiens* He can sit in company for hours without saying a word, and even without listening to what other people are saying. In fact, he can be a bit of a bore Out of politeness he is always prepared to enter into a discussion, apparently with some eagerness, concerning the weather Once this meteorological crust has been broken it is often possible to discover his opinions concerning other and less important matters. And that, very often, is the time for the more loquacious foreigner to be astonished to discover so much sound common sense Even the simple and comparatively uneducated Englishman is usually capable of pronouncing a very sound judgment Very often an intellect unburdened by detailed knowledge can get down to the essence of a question with a great deal more certainty than an intellect inhibited by greater learning and wider reading I have often been astonished at the unprejudiced directness of thought and judgment I have met with amongst ordinary Englishmen.

However even in the comparatively short time I have spent in this country—twelve years now—there has been a marked change in the general attitude towards human affairs, and there already much less indifference to the problems of the day The strengthening of the labour movement has inevitably resulted in an increased urge to knowledge and education, whilst the foreign invasion has done something to broaden the Islanders mentality After all, the sum total of the refugee flood together with the hundreds of thousands of troops from all over the world represented a great lump which did a good deal of leavening

I hope it will not be thought that I attach an exaggerated importance to formal education. This is not the case, in fact I very much doubt whether in the last resort plain common sense is not better than a "sophisticated" semi-education. Again I trust that I have not given the impression that I regard the Englishman as uneducated. Nothing of the sort. I would even say decidedly that the intellectual upper stratum of this country is better educated than any corresponding strata anywhere. England is not only the country in which a knowledge of the classics is held in higher respect than anywhere else in the world.

I don't know whether the fact has any relation to the English system of education, but I have generally found that Englishmen are not particularly enthusiastic about their work, and that their enthusiasm is reserved for their hobbies, which, incidentally are not exhausted by fretwork and jig-saw puzzles. The amount of knowledge, experience and research which can be found again and again in unexpected quarters in this country is a constant source of astonishment, and this is largely due to the hobby to the way in which the Englishman spends his leisure hours. Without hope of public recognition or material success really great performances are often achieved in this way I make bold to say that there is not a field of human thought and activity which has not valuable representatives in this country The English genius has a habit of blooming discreetly out of the great white light of publicity It would be a banality to enumerate the names of all the great heroes of the intellect who were born on this island, but one thing is quite certain to me, and that is that their hobby their personal bent, was very often the main incentive to their great achievements. English science is more often of the amateur—in the true sense—than the convulsive pedantic and philistine apparatus of science that often oppresses the spirit on the Continent. The most valuable characteristic of English science is in my opinion its refreshing lack of prejudices.

This country has produced peak achievements which have remained signal and decisive for the rest of the civilized world I certainly have no intention of writing a history of English culture, but one feature strikes me forcibly The intellectual heroes of this country have so often spoken with a voice which has been heard only on the Continent where their great ideas have been taken up eagerly whilst in their own country they met with a general lack of interest. It was the subsequent echoes from the Continent which then drew the attention of the British public to the fact that heroes of the mind dwelt in their midst. This was true of Newton and Purcell, of Davies, Faraday Maxwell, Kelvin, Joule, William Morris, Craig Bernard Shaw and many others Owing to the lack of local interest the further development of the great work of such men has then all too often been left to other peoples, to

return often in a digested form, and to be accepted and even popularized.

I suppose that the period of English history which has coincided with my presence in this country was more full of tremendous happenings than any other similar period. Our first great experience was the jubilee celebrations of King George V's reign. London went gay and the enthusiasm of its demonstrations of loyalty knew no bounds. I don't know how much was drunk in those three days during which the town never slept because one half of its inhabitants were on the streets day and night celebrating, whilst the other half was unable to sleep for the noise of the merriment. One would hardly credit the English people with the ability they possess of letting themselves go. They seem to save it up for special occasions and then let fly altogether. And when they do there is very little left of their renowned reserve.

We found ourselves carried away with it all, and we cheered we cheered with the rest. In fact, I doubt if anybody cheered more. The demonstrations of uproarious loyalty were too compelling not to sweep us along with them. I have taken part in many jolly and boisterous celebrations on the Continent, but compared with the Jubilee a Cologne Fasching is a day of mourning. The same sort of thing happened on a smaller scale when the late Duke of Kent married his Marina, and on an even greater scale, if, indeed, that were at all possible, at the coronation of George VI.

And there were occasions when we saw the people of this country disturbed and unhappy. The last illness and death of King George V was one. The mourning was sincere and widespread. And soon after that came the embarrassing affair of the succession. The few had known for some time that the Heir Apparent was involved in a love affair of which the ruling classes disapproved, and when the question of the succession arose the matter became public and developed into a crisis. Opinions were divided. The masses of the people have a deep understanding for affairs of the heart. But the abdication was inevitable. When the Duke of Windsor went he took with him the sympathy of the people, who, although they approved of the solution, retained kindly feelings for one they knew better as Edward Prince of

Wales. The last feelings of discomfort were swallowed up for good in the joyful celebration of the coronation of George VI

Having witnessed the deep emotional participation of the people in these events of public importance, I was astounded at the calmness with which they took the outbreak of war Their attitude seemed almost disinterested. The special editions of the newspapers as the crisis came to a head caused hardly more than a ripple over the surface of London life and everybody went about his business as usual. War brings disagreeable things in its train losses and a limitation of freedom. Depression is something the Englishman suffers unwillingly His interest can be aroused for the happy and amusing things of life, but not to the same extent for less pleasant affairs, and right throughout the war despite the deadly danger which threatened despite conscription, rationing points and coupons, I never saw such interest again. The majority of the people particularly in the rural areas, went on living as though the war had little to do with them. When the newspapers appeared announcing the overthrow of Mussolini I happened to be in a railway carriage with eight other people. I was the only one who took the trouble to get up and buy a paper To this day I ask myself whether I was not guilty of bad manners in allowing my curiosity to disturb the peace of my fellow passengers.

During my stay in England I have found many loyal friends. Unlike most other countries, you find more friendship and sympathy here when you are in trouble than when things are going well. The Englishman has a tendency to masochism—which is much better than the obvious tendency of certain other peoples to sadism—and he is extraordinarily helpful. But he is most helpful when his protégé is in difficulties. Refugees who fled to this country can tell tales of almost fabulous generosity and warm-heartedness, and the doers of those good deeds expected no return, not even thanks. But afterwards there is often a cooling off when the protégés no longer need help and have found their feet again. I think the intense love of children and animals met with in this country comes from a similar source. It is a deep desire to help the helpless On the other hand the Englishman is capable of being very hard towards those who are well able to look after themselves.

Now that the war is over the English people will be faced with many difficult problems and not the least of them is how the returned soldier and the girls from the services are going to settle down. For one thing they are bound to put higher demands on life than they did before, and this is likely to be still more so in the case of the girls. I think the organization of the women's services was a most remarkable performance. Out of nothing without a historical parallel and without traditions, a machine was created which functioned smoothly and with extraordinary efficiency It was altogether a new chapter in history and its consequences are likely to be immeasurable. One half of humanity was given the chance for the first time of using potential energy which had lain dormant. Totalitarian war was certainly an evil thing but it filled many empty existences with unimagined richness. It will not be possible to turn back the wheel. These girls have learnt a tremendous amount discipline, cleanliness, hygiene, mechanics, improvisation and general knowledge far beyond their previous horizon. All their practical abilities have been developed until there are few situations with which they cannot cope. Of course, the eternal feminine will remain and it will complement the new man returning from the wars.

It is doubtful whether the old family life which revolved around the home, the fireside, the kitchen, and the traditional Sunday dinner will return in quite the same guise. We must expect that central heating the restaurant, the tin box kitchenette, the cinema, the wireless and the motor-car will exercise increasingly powerful influence. A demand for freedom almost to excess is more likely than a return to the old domestic ties. And even when the first storm has passed, and the old desire for the self-contained domestic ménage returns, we must expect it to be a rather different thing than the one we knew—something more akin to the speed and mechanization of this age. Perhaps I shall regret it, but I am an old man now and most of my life is spent in memories The young people will make their own lives in accordance with the character of the age in which they are living and they will be happy and that is the great thing.

The returning men will not have to re-adapt themselves so fundamentally as their women comrades, but their demands on

life will also have increased and many of them will emigrate when they find that these increased demands cannot be met in the old country They have learnt something of the world outside England Englishmen have always gone all over the world It is a tradition to which England owes her world position. Adventure lies in the English blood. The imagination of the Englishman does not express itself so much in art or in dreams, as in going out into the world to meet new situations and master them, and the greater the difficulties met with the firmer the determination to win through. From Sir Walter Raleigh to Cecil Rhodes and the modern Commando there are innumerable examples of this urge in British history Security and indolence are not characteristics of the Englishman. The spice of danger means something to him, and if there is none in his life he seeks it in his sports or elsewhere.

The Englishman with his reputation for unromantic coolness is in reality a romantic and sentimental being He can be moved more easily by small and unimportant matters than any one else. In love he is shy and rather helpless towards the more calculating woman. She is more pretentious than he is. It is she who demands security And socially she is more ambitious than he is. It is she whose keen eye is on the next rung in the social ladder In public life, where she is the equal partner of the man, she leads her own life, and very often her opinions are diametrically opposed to those of the man In public speaking she is quite as good as he is. In welfare matters it is she who takes the lead. In administrative affairs she is thoroughly at home, and she chairs her meetings with great tact and natural discretion.

The Englishman has the reputation of being sparing with his words, but the living word is nowhere more highly thought of than in England. To be a good talker in England means a career The oratorical form is at least as important as the content. Language for the Englishman is more an æsthetic than an intellectual pleasure, and that is perhaps why his poetry is so great, and why its reputation stands so high. The language of the Bible speaks directly to him, and it has done much to form his language. But humour he loves too, and a speech, even about the bitterest and most serious matters, must always

have its nuggets of wit and humour if it is to be wholly successful. Not a little of Winston Churchill's great oratorical success is due to this characteristic. Laughter in fact, is about the only way in which the Englishman expresses his feelings openly A smiling face is half the battle in England and even the practical joker can reckon on a certain tolerance for his odious pranks.

Part of this attitude, I feel is due to the fact that nothing cloaks the feelings better than a humorous reaction, and in England feelings are rarely expressed It is not good form. Things that move a man have to be kept to himself. The troubles and trials of life are a man's own affairs, he is not supposed to burden others with them But happiness, that can be shared The Englishman is not as solemn as many of his neighbours think him he is always to be had for fun and amusement, though his demands are often very unsophisticated, even childish. On the whole the English are simple souls, and because of that practical joking is more frequent and more robust here than elsewhere, but vulgarity is not part of their character

Yes, these English have many and admirable human traits, but there is one which is not characteristic of them they seem have no need for beauty as such Things are terribly practical in England. They may even be beautiful after that, but they are practical first. Their houses their public places, their collections, their architecture, their interiors, their clothes, decorations, table arrangements and their meals—undoubtedly there is a real style which unites them all, but they are more or less practical and comfortable, and "l'art pour l'Art" is an exile

I do not say this with a light heart, and I have no doubt that many will contradict me. I am not ignoring the existence of Ruskin, of whom Carlyle declared that he had founded "a new renaissance His influence on the æsthetics of every-day life was very great, not only in this country but on the Continent too Nor do I forget William Morris, the pioneer of decoration as a career" William Morris, Rossetti, Burne-Jones and their followers did much to raise the standards of the decorative art. The influence of William Morris abroad was even greater than that of Ruskin he put, as has been said, "an ineffaceable stamp on Victorian ornament But abroad" is here the

operative word. There are exclusive social circles in this coun into which his influence seems never to have penetrated. No am afraid that despite the influence of these artists and oth like them, if the world consisted only of Englishmen the domes art of living interior decoration and so on would be on an ev lower level than they already are.

Every Mayfair house seems to have the same structure demonstrated in so many hundreds of bomb sites. You kno the lay-out of the house before you enter it, so that once insi you know your way about, which is certainly convenient. Ea house, of course, contains valuable things, for riches crea values quite irrespective of whether the valuables fit into th surroundings or not. Perhaps the items are chronological arranged just as the ancestors of the occupiers acquired the Thus you may see a Titian hanging next to a Velasquez or Duerer or an aquarelle by the Venetian Salviati. The big priva galleries, for instance, are very often not arranged by schools, historical value or favourable lighting conditions, but just chronological order according to the date of purchase. I ha had an opportunity of seeing many of the important priva galleries here and I don t think there is another country in th world where so many art treasures have been accumulated. Fo centuries it belonged to the proper education of the aristocrac to make the grand tour of the Continent. Almost all of the came back loaded with treasures. It is quite understandab that young people, often without much feeling or understandir for art, occasionally parted with their good guineas for copi and fakes, which were then religiously catalogued as authenti and in consequence there is much of doubtful value in the great collections, but they also include many masterpieces the highest artistic value.

If a census of the *objets d'art* in private possession in th country were ever taken there would be some big surprise there are masterpieces hung away in odd corners, works great beauty and significance lost to the connoisseur for th time being and often surrounded with inferior rubbish. Fo the English owners of such works their primary value is senti mental rather than artistic. I can remember on one occasio having seen a remarkably fine still-life by Rubens hanging h

office returns, and in consequence what should be the chief aim of the theatre the artistic and dramatic education of the people, suffers greatly Sensation is the effect chiefly aimed at. Sensation, of course, can sometimes be achieved with artistic means, but more often than not the means used are very far from artistic. The great thing is always that the production should show a profit and therefore, quite literally the costs of production must be kept low All too often that means cheap in every sense of the word The soul (if soul is the word) of the theatre is therefore no longer the artistic director but the entrepreneur the man who puts up the money and wants tangible financial results. Thus there is little margin for experiment. Artistic enthusiasm and ambition must give way to the stern dictation of the box-office. Capital is available for investment in productions which promise financial success—which doesn t mean that the investors never miscalculate and lose their money After that comes the popular name, the leading actor or actress who will prove a box-office attraction And finally comes the scenery costumes etc and, generally speaking, as little as possible is spent on these items.

Under such circumstances it is perhaps possible to maintain the artistic level of a theatre like the English, but hardly to develop it to greater heights. And, in fact, the refreshing breeze of new innovations and departures has not disturbed the surface of English theatre life much, and when it has it has usually come from abroad In this respect my good friend C. B. Cochran has done much. He is a worthy upholder of the old English theatrical tradition and at the same time he is a friend of the European stage in its widest sense. For him art is the first and last word in the theatre, and for this reason, despite his great successes and his long career C. B Cochran has never made any money As things are, it redounds to his credit.

I consider Cochran one of the greatest living theatre men. He started his theatrical career as an actor and he knows the stage, its actors and its public as intimately as any man ever did. His experience is unique, and throughout it all he has never been prepared to compromise at the expense of art. At times his convictions have cost him a pretty penny but at least he has the satisfaction of knowing that his sacrifices were made

is a good cause, and not a lost cause by any means. That a man of modest means should be able to point to so many honours showered upon him is perhaps more than the knowledge of a big balance at the bank, but still I think it a pity that idealistic and materialistic success should not be better balanced in this world.

Cochran has trained two generations of actors. It was he who brought the great teachers of the Continent to this country together with a good sprinkling of European dramatic and literary values. At the same time he has expended his own genius with a lavish hand as producer, teacher, discoverer of talent and educator of the public taste. And there are very few men in this country who have done more for charitable causes than Cochran. His performances for such causes must have brought in enormous sums throughout his long and rich life. He is tremendously popular amongst those who know him, and that is due primarily, I feel, to his great goodness of heart, which determines all he thinks and all he does. I have always envied him the invariably friendly and engaging manner he has with everyone with whom he comes in contact.

I have spoken of what strikes me as a lack of æsthetic demands in the life of the average Englishman. It is certainly so where his cooking is concerned. On the whole English cooking lacks the love without which no cooking can ever be a work of art. For the Englishman eating is primarily a question of satisfying a natural appetite, and provided it is satisfied he is not much interested in how, and he is almost indifferent to variety. In food, as in almost all other things, it is characteristic of the Englishman that he will not deliberately deny himself anything, but if necessary he can do without almost anything. If he is able to obtain things with ease and comfort, then nothing is too good for him, and in consequence he is certainly a welcome guest on the Continent, but he does not depend on good food well prepared to the same extent as the continental does. He is prepared to put up, he does put up, with the most primitive preparation of his food. Owing to his indifference, his wife, his clubs and pubs, his hotels and his eating places generally have no incentive to produce anything beyond the merely nutritious. The Englishman neither greatly appreciates fine food which has

been prepared with love and care nor does he complain bitterly of food which has not received the care it deserves.

I think it must be due to the climate that the Englishman takes his fat requirements from the most indigestible varieties available. Physiologically the digestibility of fat for the human body is related to the temperature at which the fat congeals, and the order of desirability is olive oil, cream, butter margarine, goose, pork, mutton and beef fat. For climatic or constitutional reasons, the Englishman prefers mutton and beef fat, both of which dissolve only slowly and this preference gives English cooking its peculiar character The characteristic smell of the Spanish kitchen is that of burned olive oil (aceto)—it can make a cruise on a Spanish ship in hot weather almost intolerable—and the characteristic smell of the English kitchen is that of overheated mutton fat.

The Englishman often takes in his supply of carbohydrates first thing in the morning with his porridge Its consistency and general character is such that on the Continent, and particularly in France and Austria, it would be thought more suitable for the bill-poster's can. The Englishman seems to have a high requirement of sugar and this—in normal times—is satisfied chiefly by the consumption of chocolate in any form, whilst children and sportsmen go in for candies and toffee The consumption of bread is not large. Bread is merely the basis for butter—or God help us margarine in these days of rationing. And even then the bread is made of denaturized white flour What is called "black bread" is just not eaten by English people, and brown or wholemeal bread is not popular There seems to be no dextrine requirements at all in this country and, in normal times at least, the crust is carefully removed from sandwiches. Albumen requirements are met by the consumption of meat, fish and cheese. The quality of the beef in England is magnificent and a sirloin would not disgrace the royal coat of arms The same is true of the mutton and lamb whilst the traditional mint sauce is a rare touch of genius But beef and mutton, boiled roasted and in pies, more or less sums up England's limited variations on the grand theme of cookery In private households, where the housewife attends to the cooking herself and there is some love and care involved English

cookery celebrates its modest triumphs. It is there, too that the pie is enjoyable. In most restaurants it suggests too strongly a review of the previous week.

English cookery when it is kept simple and the cook has no pretensions to sophistication, is good enough, but woe betide the guest when the English cook begins to titivate his products It is then almost as though he were moved by some secret urge to see how best he can ruin good material. For a simple person of normal taste and requirements it is difficult to see how lemonade made with cold water sugar and the juice of lemons—obviously my mind is taking me far back—can be spoiled but it can, and in England it is—or was. All you need do is to cook it with the lemon peel and you have a bitter brew to taste with a shock of disappointment.

Someone once asked why the Englishman does not drink coffee. Mark Twain supplied the answer "If you d ever tasted coffee in England you d know' And with that there s little more to be said. But tea! That s quite another matter and there seems to exist a *genius loci* which would make a journey to England worth while purely for the pleasure of drinking tea. The climate and the water are more than friendly to the delicate leaf they seem to enhance its inherent nobility

It is something of a riddle to me, with my interest in the physiology of nutrition, how it comes about that three of the most important raw materials for the continental kitchen, with all its noble arts, seem hardly to exist in this country I refer to the pig in the animal world, the goose amongst the feathered tribe, and the carp amongst the fishes. The continental kitchen is almost unthinkable without this marvellous trio Game such as venison and hare is also in no great favour here, whilst smoking as a means of preparing food is much neglected and the same is more or less true of veal I don t know whether this neglect comes from the indifference of the Englishman to variety in his food, but in any case it is a pity that these highly nutritious and at the same time delicious dishes find little or no place on the English menu Perhaps, in part due to the factors I have previously mentioned as broadening the Englishman s outlook, and perhaps also as a result of the increased agricultural drive which is now being made, things

will improve in this respect as they are improving in many others.

At present, however there can be little doubt that the English people feed both badly and wrongly and I am not referring to anything which is due to war and post war shortages. The whole problem of national nutrition needs a fundamental review There are other things closely connected with this problem—for instance, the high consumption of alcohol, the declining birth rate and a certain sexual indifference. Alcohol is the most highly combustible fuel. It is easily rapidly and fully consumed by the human organism, and it tends to save the albumen of the body However it is uneconomic as a foodstuff, and under certain circumstances it can have deleterious effects. Apart from the United States, there is no country in the world which has a higher consumption of alcohol than Great Britain, where it is, in fact, dangerously high. Better feeding and above all, better kitchen preparation would go a long way towards reducing this foolish abuse of a valuable aid to living

The refugee domestic workers have more or less had to adapt themselves to circumstances, but I have a feeling that the remarkably fine cooks from Prague and Vienna who have come over here in quite considerable numbers have done something to leaven the lump—and it was very lumpy In any case, it is a good sign that these cooks are appreciated and keenly sought after Not all professional cooks are good cooks. Like so many other honourable professions cookery has many practitioners who go about their business purely as a business, as a means of livelihood and nothing else. Once I went for a long country walk with the famous Swiss philosopher Forel, and we turned into a wayside inn for lunch. When the host appeared to know our pleasure Forel declared that for his part a simple scrambled-egg dish was all he required but he must insist that it be made with fresh eggs, a little butter and a pinch of salt, and—and here the philosopher raised a minatory finger—with the most important ingredient of all, a little loving care.

Yes, that is no exaggeration, the simplest dish must be made with love if it is to be really good. Only a cook by choice and instinct, a cook who cooks with love, can be a really good cook. A cook must have an altruistic nature, for he must take a joy

is sacrificing himself and his efforts for the pleasure of others, and his chief reward must lie not in his pay packet if he is a professional cook, but in just that pleasure of others, for without that it will be no pleasure. I will make so bold as to say that the artistic fantasy of a people can be judged by its cooking. Compare, for instance, Viennese cookery with its Berlin counterpart—and when you have made the comparison you will know the difference between the Austrian and the Prussian: two fundamentally different natures which repel more than they attract each other and which, even in the best case, find it difficult to get along together. A man of understanding in these matters might write a whole handbook of racial psychology with a table of national affinities and discordances—all on the basis of the art of cookery in its various national manifestations.

I have heard it suggested that there is a deep political intention which is opposed to making the British Isles too popular and which prefers a certain isolation. If one accepts this suggestion, then the state of the island's hotel and restaurant industry becomes understandable at once, but not otherwise. This important industry which brings so much grist to the financial mill of other nations is in a deplorably primitive condition in this country. Some part of the cause may lie in the British system of licensing, which does much to exclude the healthy factor of competition. Another and even more important part may be the utter lack of any standard required by the majority of the guests. Whatever the reason, the average British hotel, particularly in the smaller towns, is not an inviting institution.

Small wonder therefore that this beautiful country is so little known on the Continent and that it is not the Mecca of foreign holiday-makers it ought to be. This certainly does not apply to foreign aristocrats, who, thanks to their relations with their English cousins, have every opportunity of making the acquaintance of the country from its best angle, on the English and Scottish estates, in the castles and town and country houses. Such foreigners then often seek to introduce the agreeable and luxurious life they have met with here in their own countries, but this refers to the exceptional few only. The ordinary mortal, whether Englishman or foreigner, can look through the gates into the great park, but that is all. The ordinary tourist can do

lishman wins his wars. His industry his ability his judgment, his every attribute and characteristic, can be the subject of dispute, but he has come nearer to leading the world than any other man How he has done it no one knows and certainly not himself but perhaps that is because he never bothers his head about it and leaves the analysis to others For the Englishman there is England and there always will be, England with all her faults and failings and all her truly lovable qualities and all her real greatness And as one not an Englishman, but with the privilege of living in this England, I am glad of it.

A DOCTOR'S DIALOGUES

It is not an easy matter to lay down any definite rules of life. For one thing, the result might be too simple and verge on quackery or on the other hand it might turn out to be too 'scientific' a sort of medical mystical dialectic, pretentious and ununderstandable for the people concerned. However in view of my long experience, stretching over almost half a century as a practising doctor and after long consideration, I have decided to take the advice of my friends and run the risks involved in setting down in print advice given from time to time to my patients—advice which I now consider might be of general interest and benefit. The doctor's practice is the application of medical science to ordinary everyday life. The two things affect each other mutually and beneficially I know the requirements of patients, and my scientific research work has invariably been based on or initiated by their needs and by my close relation with them.

All my medical life I have tried to steer clear of cut-and-dried school wisdom, prejudice and medical arrogance. For one thing, I have never treated my patients as though they were awkward school children. I have never assumed an air of superior wisdom and treated them as many people do treat children 'You don't understand that you're too young' I like to make things as plain as I can to my patients and to discuss with them not only their particular sickness, but my particular treatment of it, and I have never hesitated to let them know the limits of my knowledge and my ability to assist them. As I have already indicated in the body of this book, I am absolutely opposed to the medieval tradition of secrecy and mystification in medical affairs. Medical science and its application must be kept as generally understandable as the nature of the case permits, and it should not be degraded to the level of a secret science with all its mumbo-jumbo. My personal ambition never went farther than to be a good general practitioner at home on all fields of medical practice. I have always loved my work, and served humanity as best I could

I have practised in many countries and got to know all sorts of people, including colleagues from all parts of the world. In my experience there is no very fundamental difference between sick people of one race or nation and those of another. All of them groan when they are in great pain, and all of them smile when things are going well. There are, of course, very great differences between one patient and another but very rarely are these differences to be explained by racial or national characteristics. Everyone loves life, and no one likes to die. A banality? Perhaps, but it is the fundamental basis of all medical practice. What every patients wants in the last resort is that his doctor shall help him to a life free of physical suffering and ailments, and give him a sound hope that the inevitable end will be postponed as long as possible.

Lots of philosophers and other people have cudgelled their brains to discover a satisfactory explanation of the purpose of life. For my part I agree with Goethe that the practical solution is that life is there to be lived. The criterion of a healthy human being is his joy of life. Our instinct for life, for which there is no satisfactory motivation, keeps us alive, and that instinct, when [illegible] is uncompromising whatever may fall to our lot, it compels us to drink the glass down to the last dregs. I have met many would be suicides who have survived their attempt, but I have never met one who did not suffer from some serious mental defect. We know that all human instincts are capable of perversion, and the instinct for life is perverted in some people to such an extent that at the first serious or apparently serious difficulty met with their reaction is to throw their lives away. Generally speaking such individuals, as valuable as they may be in other respects, cannot be saved. During the first world war I had cause to observe, again and again during an advance or in an enemy attack, that it was the soldier's confidence in his own life that kept him secure in his own mind even when his comrade dropped dead at his side. No other illusion is so firmly implanted in a man as the illusion that it couldn't happen to him. But generally speaking the first serious wound deprived the soldier of that firm confidence, and very often turned it into its opposite, the fear of death. I am firmly convinced that if Freud had taken the overridingly powerful instinct for life as

the point of departure for his psychological investigations, instead of the subordinate sexual instinct, he would have achieved still greater and more fruitful results.

The instinct for life is more powerful than any other. How often can the doctor see absolutely hopeless cases, old people, physically utterly decrepit people, clinging fiercely to a life which is utterly useless to them, and inventing all sorts of reasons why they must live on, why they have a right to live on even as a burden to others? There is always something left they passionately want to be alive to witness: a coronation, a revolution, a political victory, the birth of a grandchild or some other happy family event. And there is no doubt whatever that the span of life is literally extended by such purposeful wishes. This is the chief reason why it so often proves fatal to advise old people to retire and "take it easy". When August Thyssen was in his eighty-fourth year I advised him to extend his field of operations rather than abandon it, and my advice delighted him. 'How right you are!' he exclaimed. "You know that whenever I have been ill in my life it was always due to my pleasures and never to my work." When the Vienna Medical Faculty decided on seventy years as the retiring age, almost all the vigorous old pioneers who had to retire died very soon afterwards. It is best to die in harness, and in that event death will probably be postponed to the very last minute. This does not necessarily mean full trappings, of course, but some definite activity which still gives life an aim. It may well be a hobby which is taken seriously. To have nothing purposeful to do—that is the danger for old people who have led an active life. Any duty helps to keep the bow of life properly taut, and therefore I never advise old people to give up their activities and retire altogether.

During the past fifty years methods of diagnosis have developed notably, but even to-day too little attention is paid to a patient's medical history. Unless the doctor discusses the case with his patient and thus extracts all possible information, then the practise of medical science is reduced to the level of veterinary science. The horse *can't* talk, but the patient can.

It is during the important discussion of the patient's medical history that he will gain or lose confidence in his doctor. A

doctor will construct his diagnosis on the basis of the medical history of the case, plus the patient's complaints, plus perhaps the doctor's first impression of the patient and plus whatever he discovers in the first examination on the basis of his five senses. The result forms the basis on which the further examination and treatment of the case must take place. The diagnosis is based on thought association

The comparative neglect of the medical history of the case to-day derives from the rapid development of the positive aspects of medical science and from the great development of the objective physical, chemical, bacteriological and microscopic methods of diagnosis. The modern doctor has largely lost confidence in his diagnostic intuition, and he uses his five senses and trusts them less than his predecessors did. That is regrettable, because in the last resort the practise of medicine is an art, and science is its handmaid. A doctor should first of all examine the relation of the various bodily functions to each other A good diagnosis is impossible according to any mechanical schema. The final verdict of the doctor should depend at least in part on his own imaginative intuition. The medical student must be taught to build up the artistic structure of the diagnosis from the individual bricks which science affords him.

The taking of the case-history should be accompanied by an examination because the first impression will guide the subsequent progress. The doctor must immediately establish any constitutional and physiological anomalies. The condition of the extremities can demonstrate the length of the sickness. A soft sole suggests a long illness A hard palm suggests hard work. The facial wrinkles are an indication of the patient's temperament good humoured, pensive, cholenc or depressive. Clothing, ornament tattooing, etc., many things give valuable information about the personality of the patient. A bluish teleangiectatic mole in the region of the neck or a third breast nipple which looks like an ordinary wart, but is erectile hypospadiasis, cryptorchism, rudimentary gills, polydactilia, birth marks, etc.

All forms of inhibited development have their own particular psychological projection, and patients who suffer from them must be treated in a different manner from ordinary patients.

They react quite differently to the same stimuli. Women with masculine characteristics—for instance, with pubic hair which does not cease in a more or less horizontal line but grows on up the belly to the navel in a rhomboid shape—are psychologically quite different from women who indicate their excessive femininity by a definite dermography

The medical history should go beyond the patient himself, and include such of his relatives as are of importance to the case, and that does not mean merely his parents, his brothers and sisters and his children, for the Mendelian Law has shown us that we must probe still deeper This, of course, is a matter of great delicacy and it is not easy because quite naturally a patient will hesitate to reveal the physical secrets of other persons, no matter how closely they may be related to himself There is also the danger that information obtained in this way is distorted by a desire on the part of the patient to show himself in a better light than his relatives. Illegitimacy which is naturally of great importance in such inquiries, will usually be concealed. But all these difficulties are as nothing compared with those which face the doctor when he tries to get information concerning the patient himself. Exaggerations, understatements and distortions are frequent. *They are not always deliberate*, because very often a patient has formed a very inaccurate impression of his own personality In such cases the establishment of the case-history can develop into a sort of psycho-analytical investigation. If the doctor suspects the patient of telling untruths or of concealing the truth, it is naturally his duty to elicit the truth if he can. When the patient begins to feel that he is tactically at a disadvantage towards the doctor with his wide medical experience, then he will usually abandon his prevarications and become confidential. And here the doctor must not forget the patient's lies in his relief in having got at *the truth at last*, because a lie will often tell him more about a patient than the truth can.

The medical history of earlier sicknesses is sometimes difficult to obtain The patient will often talk of acidity congestion of the liver nerves, digestive troubles, rheumatism, using many similarly ambiguous expressions. Pains will often be wrongfully localized in various organs—for instance, *pains in the back will*—

be ascribed to kidney trouble whilst pains in the chest will often be ascribed to heart trouble. As far as possible the patient must be persuaded not to repeat other people's diagnoses or to give his own but merely to describe his complaints without ascription. *If this* is done it will often prove surprising how accurately a patient will describe the sudden onset of cramp the sudden appearance and the slow disappearance of colic, the pains suffered in an attack of angina pectoris, the agonizing distress of an asthmatic attack, and so on If a patient is closely studied whilst he is describing his trouble and its symptoms the doctor can often see from the expression of his face and the gesticulations with which he accompanies his story how deep an impression his trouble has made on him. At this early stage he usually describes the symptoms which seem most important to him. Such symptoms need not necessarily have a great deal to do with his trouble, but nevertheless the doctor must pay careful attention to them because they show him the impression they have made on the patient. The patients described by Charcot, les hommes avec les petits papiers are not only to be found amongst patients who suffer from an excessive secretion of the thyroid gland (Basedow) The doctor must listen carefully to all his patient has to say though, naturally repetitions and mere chatter can be cut short by questions about other symptoms. Pater Gracian gives us sound advice in his Hand Oracle 'You must let a man talk before you can discover how little he has to say They are words of wisdom for the medical man.

A doctor must always be cautious in his judgment of the information given him by a patient concerning magnitudes and quantities. A patient will always judge his appetite by the appetites of the people with whom he eats He will usually judge the efficacy of his bowel evacuation by the number of times he goes to stool rather than by the volume of the evacuation. Sweating is judged by the number of times it proves necessary to change clothing A hæmorrhage will always be judged from the size of the vessel in which the blood is emptied, and it is always a bowl full. The menstrual flow is always judged by the number of towels used And so on

Few phenomena in the physical and psychological develop-

ment of the human being are so important to the doctor as those of adolescence. The fewer troubles experienced in this transitional period the more likely is the subsequent adult sexual life of the patient to be normal, and vice versa. Many mysterious and unexplainable troubles can often be traced to a hormone disturbance in persons who have experienced difficulties in adolescence. Quite generally tact and ingenuity are necessary in large measure if the doctor is to obtain satisfactory information in matters relating to the patient's sexual life. But if he is successful in winning the confidence of his patient and obtaining a clear picture, this fact in itself will often lead to astonishing improvements in the patient, particularly if he is inclined to be neurotic. Open confession is very good for the soul—and often for the body

I am inclined to believe that modern medical practice overestimates the value of objective examination. An objective examination of the organ or of the organic system makes it possible for the doctor to localize the changes, but it is more akin to a sort of medical sport to discover that a patient is suffering from a hardening of the liver from pulmonary tuberculosis or a cardiac disease of the heart. It is much more interesting and much more important to discover if possible, how the patient managed to live with this or that trouble, as he undoubtedly did up to the moment of his death. Such an investigation is calculated to give us some idea of what auxiliary forces the body can summon up to replace the activity of decrepit organs, and therefore to give us a pointer to compensatory treatment. To-day medical practice is turning away from the study of pathological anatomy to the study of the living functions, from the study of the organ to a study of the living organism, and that is a very promising development.

Physiology is exclusively concerned with the study of the normal body and the experiments on which our present knowledge is based have been carried out under exceptional circumstances—that is to say during aggravated functional activity or extreme functional inhibition. Experiments on organs and tissue cut away from the living organism are still regarded as valid for the real living functional activity in the organism. But I hold that such examinations cannot possibly be valid for the co-

ordinative, automatic and compensating mechanism which functions in the living organism. In the best case they are nothing but individual small stones in the integral mosaic of life. Further such experiments cannot possibly show us what contribution the living forces have made to the maintenance of life after an organ has been seriously damaged The *restitutio ad integrum* in pathology is a rare phenomenon. *In my opinion, therefore, research should concentrate on explaining the development of the natural compensatory mechanism* of the human body whilst *treatment should* aim at utilising it.

The statistical method is valuable for dealing with humanity collectively but in medical practice the individual judgment is the important thing For instance we know by experience that in the present state of medical knowledge, etc., approximately 15 per cent. of all cases will end fatally during an epidemic of typhus, but that tells us nothing at all about the far more interesting question of whether our patient will end up amongst the 15 per cent. who succumb or amongst the 85 per cent. who survive. In the *relation between the individual and his sickness it is not so much the sickness as the patient who varies*. Two cases of stomach ulcers of the same magnitude and location will not always justify the same prognosis and treatment. The two patients may be quite different. If a medical history is properly secured it will often tell us without more ado why and how a patient fell ill or met with an accident Very often a nervous ailment in its opening stages with a delayed period of reaction or with a weakening of the co-ordinating mechanism will prove to have been the cause of an accident, and thus give the *first indication of a tumour on the brain or some disease* of the spine, or some ear or eye trouble. The medical history will often throw more light on such integral functional disturbances as reveal themselves in appearance, breathing pulse, blood pressure, appetite, sweating, temperature, sleep physical attitude, gait, weight and so on, than any specific examination can.

One of the best ways to judge a patient's functions is to suggest to him the performance of a task you suspect to be beyond his capacity and then observe his psychophysical *reaction* to the suggestion. For *instance*, if a heart sufferer is asked whether he could run up five flights of stairs to the top of the house, you

can see from the astonished look on his face what an effort the attempt to carry out such a suggestion would cost him, and from that you can judge the condition of his heart. The mere idea of doing such a thing gives him a fright. A test meal will give us comparatively little information compared with that we can obtain from a patient's facial expression when we talk to him about his favourite food. If we ask a man who is suffering from acidity of the stomach whether he could drink a glassful of melted butter he will perhaps declare that he could, but ask him the same question when he suffers from a deficiency of digestive acid and the very suggestion will arouse disgust in him. This psycho-physical reflex is so finely graded that one could almost speak of a psychological titration of the digestive juices.

In all these matters a doctor should remember that the relation between him and his patient is a reciprocal one. The doctor analyses the patient by the answers the patient gives to his questions, and the patient analyses the doctor by the questions the doctor asks him. It is the psycho-analysis of the psycho-analyst which produces confidence—or destroys it. The long view sympathy mild judgment, encouragement, advice and the establishment of confidence—all these things are necessary to the drawing up of a good medical history In no phase of human relationships are experience and knowledge of greater value than in the relation between the doctor and his patient.

The economy of the human body is a matter of balance. Too much food and too little consumption lead to the formation of fat just as certainly as too little food and too much consumption lead to emaciation. That would be all very simple but for the fact that the life process is a complicated matter The taking of food is neither identical with suitability nor utilization. Each foodstuff has not only a different calorific value, but it is also differently composed of the various things which go to make up the human body The chief things are albumen, sugar (carbohydrates) fats, salt and water Up to a point one brick can replace another in the final edifice, but at least a minimum quantity of each of these basic substances must be taken regularly if life is to be maintained. These various basic substances cannot replace each other and it is quite impossible to make up

a deficiency of vitamins (as we now know)—were always comparatively rare. However any medical man is entitled to be proud that even these rare diseases have now disappeared, thanks to the progress of medical science and the discovery of vitamins. But ought we now to go so far as to recommend the artificial addition of vitamin substance to food as a general measure, even when there are no indications that additional vitamin intake is necessary? That seems to me an important question. The ordinary human being well fed on a sufficiently varied diet never did suffer at least not in ordinary circumstances, from any vitamin deficiency Vitamins are not rare substances they are found in generous quantities, and in proper proportions such as the body needs, in our normal diet. So long as our knowledge of the possible consequences of excessive vitamin intake—that is to say of hypervitamin ailments—is not sufficiently developed, we ought to be cautious, owing to the possibility of excessive dosages with artificial vitamin substances. My long experience tells me that it is time to raise a warning voice against the indiscriminate use of such substances, and to point out that a generous and varied diet contains all the vitamins we know of, and presumably many we do not yet know - and in addition other substances and elements which are still hidden to us, whereas the human body can certainly not live on vitamins alone.

And the situation with regard to that other remarkable discovery the hormones is not much different. In this respect we have got as far as the third stage we know what damage can be done by an excess of hormones, and we have surmounted the danger But the trouble is, if I may borrow a metaphor from the world of music, we rather tend to think ourselves masters of extreme virtuosity merely because we have learnt to hammer out the tune with one finger on the piano we are inclined to forget the great orchestra which must work in harmony to produce the full symphony Undoubtedly the tune is important, but there are passages in which the contrapuntal effect is still more important. To return to our hormones, we know something about this or that hormone we know what troubles arise when this or that hormone is present in the blood in excessive quantities and we know the troubles that arise when the body

does not produce it in sufficient quantities. But what we still know hardly anything about is the all-important process of co-operation which goes on between the various hormones in the human blood-stream, and about their qualitative and quantitative relations to each other But at least by this time we have learnt that it behoves us to proceed with caution and not to prescribe one thing indiscriminately for everything We know that the automatic functions of life are regulated by the co-operation of all the hormones, including the digestive and assimilatory processes. We know most about the effect of the thyroid gland and its secretions. We can demonstrate that in the case of excessive secretion the process of oxidization is speeded up and that when the secretion is inadequate the process of combustion in the human body is slowed down. To use a plain comparison, it is very much as though a boiler were placed under forced draught in the one case and deprived of draught, or sufficient draught, by closing down the regulators in the other

The human body functions best when its intake properly balances its consumption. As such, the regulation is automatic, but in the over-civilized life we all lead the machinery is often subjected to excessive strain. The automatic regulator or regulating process, must watch over one point with particular care, and that is the maintenance of an even temperature. When too much food is taken, then the organism has various ways of dealing with the surplus it can eject it without breaking it down and assimilating it in the ordinary way it can turn the surplus, or part of it, into a reserve fund or it can get rid of it by an expansive release of heat in the form of sweat, bodily radiation or expiration. These possibilities explain how it can come about that certain people remain thin despite the intake of generous quantities of food whilst others put on fat. In both cases the temperature remains, with very minor variations, the same. What we must aim for in our diet is to secure that with a uniform bodily consumption that minimum of food is eaten which will maintain the bodily weight at its proper level without important variation. If this ideal rule is successfully followed, then the common disturbances of the body's metabolism will be avoided.

account of individual tastes, but it must be suited to the general environment, and come from the general neighbourhood, and not be brought in from far-off climes. Having regard to present day transport possibilities, with their speed, this last postulate may seem an excessively fussy one, and in fact, it is of no great importance for the ordinary healthy man, but for the more delicate person with a less robust capacity for adaptation a deviation from this rule might have the same sort of effect as the rarefied air of the mountains sometimes has on people who normally live by the sea, or as a northern climate has on people who normally live in a southern climate. The degree of adaptation is a measure of health and vitality During the First World War I saw prisoners unloaded from a heated cattle truck with a temperature of 30 degrees (Celsius) of heat into an outside temperature of 30 degrees of cold Many of them showed no signs of distress whatever at the sudden change of 60 degrees in the temperature, whilst others fell ill and suffered from swelling Pilots have flown at enormous heights without showing any signs of distress whilst other people have to make two pauses for some considerable time to achieve the transition to the height of St Moritz without ill effects. The same great degree of adaptation in their feeding can be demanded of many without the least trouble, but delicate persons will do best on a diet which comes from their own environment. The strong and healthy man can stand almost any variations. The law of accommodation can be applied to any bodily function, and we shall return to it on many occasions when considering other cases of adaptation. And now for my *alter ego* the hypothetical patient who asks me the convenient questions I am anxious to answer

In discussing physiology and particularly in referring to the digestive processes bodily assimilation and so on, you repeatedly used the term automatic what do you mean by that in such a connection?

Fundamentally speaking our whole, what I may term vegetative life is automatic. Very little is left for us to decide on our own initiative Let us take the question of our nutrition. We are brought to eat by a mysterious bodily feeling we call hunger Out of a large variety of foodstuffs we choose (or we did choose when we had the chance) what our inner man sug-

gests. After that we have the very conditional freedom that, having looked at it, smelt it and tasted it, we can put it into our mouths, chew it and finally swallow it—or spit it out after the first taste if we don t like it and are prepared to defy the usual con ventions. Up to a point, therefore, it looks almost as though the whole process was guided by our own free will. However once you have swallowed the food all voluntary control over it ceases and it comes under the undisputed direction of the automatic controller and the whole bodily process of digestion proceeds, as I have said, automatically The secretions of the liver and the pancreas are exuded, the bowels make their typical movement, the food is broken down, the beneficial content is isolated, the useless rest is eliminated and so on. A tremendous and extraordinarily complicated task of unconscious co-ordination and automatically succeeding processes is performed and the part the will has played in the whole affair is very small. If we take this process as a paradigm we can judge how small is the conscious control of our lives.

We have now approached another important question—that of free will. If we accept the purpose of life to be the maintenance of life and the perpetuation of the species, and when we observe that these processes are largely automatic, then the only purposeful mental process is that which fits us consciously into our social surroundings, into the common life of our society—in short, everything which is laid down for us in the Ten Commandments as the only rules of social life.

If all religions could be boiled down to this simple residue our social continuity would be guaranteed for ever for no two men could live side by side for long unless these Commandments were obeyed. Our thought has an almost exclusively social task. It is not essentially necessary for the well-being of our vegetative life. We should just as well be able to exist with our animal instincts, our reflexes and our tropisms. I am anxious to avoid stepping on to the slippery plane of philosophy and theology for I am no acrobat, so let us leave it at that.

Is it possible for the conscious will to disturb the unconscious, vegetative life?

Certainly and almost all medical intervention does, in so far

as it does not support and encourage the natural automatic functioning of the human body but runs counter to it. The violation of this simple rule is the source of so many medical misdeeds. A doctor should humbly accept the principle *medicus curat natura sanat*. A grain of sand can bring the complicated mechanism of a watch to a standstill. The grain of sand bears no responsibility but arrogant human beings who would like to change the whole wonderful mechanism on the basis of radical *a priori* conclusions based on their own ignorance most certainly do. An example of what I mean is the present-day attitude of so many medical men who jump at the chance of removing a patient's appendix, peeling out his tonsils and dragging out all of his thirty-two teeth as a sort of error of nature. At the risk of being denounced as a reactionary stick-in-the-mud I must raise a warning voice against this light-hearted scalpel and forceps brandishing. These ultra-modern medical men are very much like the ultra-stupid serving wench who tipped the baby out with the bath-water. To take a different example. A lightning conductor which is not properly earthed is worse than no lightning conductor but to seek to abolish all lightning conductors whether properly earthed or not, on that account is ignorant folly. The great benefits of surgery are being abused in our day by ultra-radical practitioners.

The problem of feeding a normally healthy human being is rather too complicated for the laying down of universally applicable rules, but generally speaking one can say that a healthy man who eats the good food of the general neighbourhood in which he is living, and who does not eat more of it than is necessary to keep his bodily weight more or less stable, will be doing the right thing by his stomach. Quite generally one can say that a good diet is one that suits you. One thing is certainly true, and that is that permanent over-feeding does much more harm and brings far more people to an early grave than any temporary shortage. This is a rule that applies in particular to children, though, of course one must not go to the other extreme. Milk is quite generally over-estimated and even abused as a food. For wasting sicknesses, and in cases where other nourishment proves difficult, milk is certainly a good food, though it must always be borne in mind that it should be taken

in sips, and not drunk straight off like water as it so often is. But it is, despite its advantages, a greatly over-estimated food for both adults and children—naturally I am not referring to sucklings. Offhand I cannot think of any animal apart from the domestic cat which shows any great liking for milk as a food once it has been weaned Milk and milk products are highly desirable in the preparation of nourishing and tasty foods—that is, as ingredients to a good kitchen—but considered as a food in itself milk is, from the standpoint of its nourishment expensive and unsuitable

The idea of the rampant chemical fan that the ideal food can be contained in a pill is another one that should be stamped on thoroughly Eating and nourishment are not the same thing, though they may and, fortunately often do amount to the same thing From the standpoint of what is known as physiological nourishment" the thing that matters is the nourishment value of the foodstuff, but that is only conditionally correct. A horse chews up 90 per cent. of indigestible ballast such as cellulose in order to obtain 10 per cent. nourishment, whereas an ordinary civilized human being eats about 10 per cent. undigestible ballast to obtain 90 per cent. nourishment. This is certainly unnatural, and there is hardly a similar instance in nature. The human organism could not continue to function for any length of time on a food pill (or anything analogous) Food must have a certain bulk and contain matter which affects the intestines purely as a mechanical stimulant, which cannot be broken up, which remains behind after the process of digestion as slack, and which forms the main bulk of the evacuation. The intestinal canal can function only when it receives suitable material to work on. If the food intake lacks sufficient bulk, then the intestinal canal grows flaccid from lack of work, and in consequence the whole digestive process suffers and insufficient nourishment is obtained from the food eaten. For this reason alone it would be fatal—literally fatal in the long run—to attempt to live on foods which can be wholly broken down by the digestive processes, such as eggs, cream, butter milk, caviare, etc. We must therefore also consume woody and fibrous stuffs, such as are contained particularly in vegetables, grain and fruit, and in generous quantities. The intestinal canal has an overall length

of something like eight yards. It is a muscle and, like all other muscles, it must be given enough to do if its tone is to be kept healthy In this respect a vegetarian form of feeding is greatly superior to a form of feeding based primarily on animal substances. But the best form of feeding is a mixed diet. For one thing the construction of our teeth suggests that a mixed diet is the proper one for human beings Our physical constitution is that of an omnivorous animal, and we should be well advised to bear this in mind and arrange our diet accordingly

What effect has the war and war-time feeding had on the population?

Since the introduction of rationing this country can be compared with a sanatorium in which careful attention is paid to dieting No one not even the most inveterate grumbler in his wildest exaggerations, can talk about starvation or even semi-starvation in this country though unfortunately this has not been true of many other countries during the war—and after This country has always had a sufficiency of everything really necessary to maintain good health, and, of course, there has most certainly been no danger of over feeding The result is undoubtedly that since the introduction of rationing the general health of the country has improved. Future statistics will show us the favourable effects of moderation in diet even more clearly than we can observe them to-day but any medical practitioner knows from his own experience that many metabolistic disorders, such as gout, diabetes, stomach troubles and liver disturbances, have been noticeably reduced in incidence and severity People who suffered from minor disturbances of the liver people who were 'liverish have discovered that during the rationing, which reduced the number of eggs they consumed almost to vanishing point their liverishness has largely disappeared. The only field on which in my opinion there is a real shortage is the fat supply and here it would be very advantageous for the general health of the country if the ration could be increased. Apart from that, the shortages on almost every other field are made good by the liberal quantities of bread available. People who suffer from any form of wasting sickness are certainly badly off, even with their priority rations. The stringencies of the time fall heaviest on them. A further diffi-

culty of war (and post war) rationing is that of prescribing any particular diet. However on the whole I am firmly convinced that the number of cases of real hardship as a result of rationing in this country are infinitesimal compared with the vast number of people whose health has benefited by it. The founders of the early religions of mankind knew what they were doing when they sprinkled fast days over the year

Whilst the nutrition problem in this country is largely solved, the situation in much of the rest of Europe represents one of the most important and difficult post war problems The distribution of existing world supplies is primarily a transport problem for non European countries, but in war torn Europe there is unfortunately every likelihood that it will take some time before ordered conditions return and the food situation becomes normal. The problem has three main facets (*a*) the keeping alive of those who have survived so far (*b*) the filling up of deplenished reserves and (*c*) the building up of the youth. The last category must include the re-convalescents as well as children and adolescents. Many sympathetic souls are inclined to salve their consciences by pleading for extra large supplies of vitamins to be sent to Europe. This is an absurd proposal. The situation is far too serious for amateurish fooling The main truth in this respect, and I repeat it deliberately is that normal foodstuffs contain *all* the vitamins necessary to life and health, but vitamins in themselves are not nourishing and they are not food. Fats, vegetables, bread, meat and animal products are necessary for good all round nourishment, and it will be a long time before the world will be able to get along without rationing these essential foodstuffs. Credits must be made available for the purchase of supplementary quantities where necessary Until a people, any people, is properly fed it cannot begin to pay for its food etc., with its labour power

In view of the fact that during the war Germany plundered the invaded countries of their foodstuffs and food products for her own benefit, it is only just, in my opinion, that the victim countries should receive preferential treatment now and that they should have first call on world food supplies. And even then no exaggerated sentiment is appropriate with regard to Germany whose agriculture has been developed with the alm_

of making her people as self-sufficing as possible in foodstuffs. The first duty of the world is towards Germany's half-starved victims. The highly effective transport system which was built up for war purposes should now be turned to the needs of peace. A world food office should be founded with power to control the movements of all foodstuffs, and no ship should be permitted to unload anywhere in the world without its Navicert. Control was extraordinarily effective in war. Why should it not be equally effective in peace? Imported foodstuffs should benefit first the children, then women between twenty and forty years of age, then manual workers and finally the rest of the population. That the growing youth should have priority is quite clear to everyone. I then propose that women between twenty and forty years of age should be next on the list because experience shows that the ovular activity of hungry women begins to decline. Thus in the interests of coming generations women in the full period of sexual maturity should be as well fed as possible. Their counterpart is, of course, the men in the same period of sexual maturity. Older people, who represent about one-third of the total population, are on the whole better off with a limited supply of food, provided that it does not sink below the minimum calorific value necessary.

During and immediately after the first world war Germany suffered grievously from under feeding. Ernest Starling, the well known physiologist of London University, was sent to Germany by the Government of the day to investigate the deterioration of public health in Germany by under nourishment. The German Government instructed me to assist Starling in his task and show him everything necessary. The situation we found in working-class districts, mountainous districts, mining districts and in prisons was terrible indeed. Starling, a man of generous temperament and nobility of character, was so horrified at what he saw that on his return to England he became one of the leading spirits in the movement of opposition to that provision of the Versailles Treaty which called for the surrender of Germany's milch cows. With this and other measures he was certainly instrumental in saving the lives of hundreds of thousands of children, though, to be sure, it is a depressing thought that these same children were amongst those who as adults

cold-bloodedly took the bread from other people's mouths and let them starve.

One of the most obvious phenomena during the hunger period in Germany was the deterioration in mental capacity amongst school children. Experienced teachers have assured me that it amounted to something like a third. Another very obvious feature of that period was the loss of size and weight in both children and cattle. In the schools desks no longer fitted children in the age categories for which they were intended. The children were all about a year behind in their growth, and they never recovered this loss even when things changed for the better. A whole generation was stunted, though this does not in the last resort seem to have made much difference to their subsequent working capacity. Girls who suffered from under-nourishment entered the ovulation period later, whilst with adult women it tended to disappear altogether. Similarly the sexual capacity of males was reduced, with the result that the birth rate fell noticeably. Generally speaking, one can say as a result of this involuntary mass experiment that damage to health as a result of under-nourishment began to show only after bodily weight had dropped more than 15 per cent. of the total normal weight. Middle-aged people were demonstrably able to stand under-nourishment better than any others and, in fact, the experience often proved of benefit to them. These middle-aged people, in the economically most productive period of their lives, recovered more rapidly than others and once normality had returned they were as healthy and vigorous as ever. It was thanks primarily to these people that Germany so quickly recovered her position in the world.

As a medical man the experiences of the front-line soldier in the first world war greatly interested me. I was, I must confess, astonished to observe after a while that, despite the wet and cold of trench life, rheumatic fever played little or no role in their troubles, and that despite a comparatively low standard of nourishment, the German soldier hardly suffered from stomach disorders. I had difficulty in finding cases of stomach trouble, arterio-sclerosis, kidney shrinkage, apoplexy, diabetes and gout for my lectures behind the front line. On the other hand, cases of tuberculosis, dysentery, influenza and other in-

fections were very numerous and the mortality rate was extremely high.

Great as was the damage done to mankind by these sicknesses and by the consequences of wounds, disablement, weakness and so on the psychical damage was far greater To put it generally war psychosis results in an aggravation of existing peacetime tendencies the great becomes greater the bad becomes worse the good becomes better The basic characteristics of races, nations and individuals are enhanced and become visible as though looked at through a magnifying glass. The inhibitions imposed by civilization and community life tend to disappear In the re-valuation of all values the inborn lower instincts are released and search for expression. Murder robbery etc. become virtues. They are given the cloak of 'heroism' and not only permitted but encouraged The result for the post war generation is deplorable.

The intake of nourishment and the expenditure of energy are essentially related to each other If this relation is not properly regulated, then in the event of excessive work—*i.e.*, relatively excessive expenditure of energy—the human tissues waste away whilst in the opposite case—a too great intake of nourishment in relation to the expenditure of energy *i.e.*, exercise, etc.—fatty tissue accumulates. As I have already pointed out, when the intake of nourishment drops below normal the body falls back on its reserves and the first to go are the substances the body can best do without—and what is more thoroughly useless than the deposits in the joints, for instance, or the surplus quantities of blood which are effectively reduced, together with the intake of salt To keep himself thoroughly fit in ordinary times a man should either strictly adhere to the fasting ritual of one of the old religions, or stay in a dietetic sanatorium for three weeks every year Modern warfare, with its necessary control and reduction of nourishment, has much the same effect but it is otherwise a rather costly way of achieving a desirable result. Another way of preventing the deposit of fatty tissue, etc., is by working off all the energy contained in the food intake by physical exercise. Incidentally a thoroughly healthy body will go far towards regulating itself. In the event of an insufficient intake of nourishment it reduces the consumption of energy

whilst in the case of excessive food intake there is often an urge to greater physical activity to work it off. Bodily activity is the safety-vent for accumulated energy It is a reversible process, and if there is anything wrong with the appetite and the metabolic process generally they can often be encouraged to greater activity by bodily activity Now although we are in a position to exercise an effect on bodily weight, etc. by controlled expenditure of energy there is little we can do about chronic wasting There is a big difference between what is called slimming and chronic wasting

What is your opinion about the fashion for slimming?

The world of mankind, particularly of womankind, can be divided into two camps the camp of those who want to get slimmer and the camp of those who want to get fatter There is another camp of course—the camp of the satisfied—but this is not a large one. The question refers more to fashion than to hygiene. In a period of pronounced sexuality mankind favours the voluptuous figure, whilst in a period marked by economic and other crises the slim figure is more favoured. To-day women prefer to look as much like boys as possible, and they have changed not only their clothes, but also their bodily stance, and even their bodily form. To-day a woman is almost ashamed of having breasts at all. And the remarkable thing is that in recent years the female breast has gone some considerable way towards atrophy But is this disappearance of the breast a cultural achievement? We must, I am afraid, regard it as a sign of physical degeneration. Incidentally plumpness and slimness are both racial characteristics. Anyone can slim by artificial means, but once the procedure is abandoned he will return to his normal bodily tendency

There is one difference to be noted. The corpulent can attain a maximum bodily weight, and beyond that they can accumulate no further fat but with artificial means slimming can be continued to the absolute point where there is no more fat at all. Thus stuffing cures find their own limit whilst slimming has no limits, and is therefore dangerous. There is no simpler task than to get down any man's weight. All that is necessary is to reduce the calorific intake with a certain technique. On

the other hand a full knowledge of metabolistic physiology is necessary to put fat on to an obstinately thin person

Nothing is the cause of nothing but nevertheless you can often hear people and particularly women, say sorrowfully *I eat so little and yet I put on fat*. But, as I have already pointed out, it is not quantity alone that counts, but primarily the fat content or quality of what is eaten. For instance, in a plate of thick soup there can quite easily be a quarter of a pound of butter representing the calorific equivalent of over three pounds of bread. Inquiries are therefore necessary before accepting the statement of such a person that he, or she, eats little. With less food particularly less fatty food, anyone can reduce his weight to the amount he requires. Some people find it more difficult to reduce than others, but I have never met anyone whose weight could not in the end be reduced by a strict diet.

The situation with regard to increasing weight is rather different. Quite apart from the fact that it is not easy to get any one to increase his food intake considerably in quantity we are not in a position to affect the fat relation on which any particular organism is based. Disturbances of the fermenting and enzyme digestive processes, inadequate resorption intensified combustion or expenditure of heat, and many other hormonally regulated functions can act as a hindrance. It is far more difficult to overcome these obstacles than it is to secure a reduction in weight.

The ideal would be to mould the body to our wishes by controlled increase and decrease, and ways and means to this ideal condition are being sought putting on here and taking off there. But there is one physical infirmity where the outlook is quite hopeless. I refer to the æsthetically disagreeable dependent and protuberant belly of advancing years. Man has practised an upright stance and gait for a long time now and in accordance with the laws of gravity the internal organs tend to sink. In youth the muscles, etc., are strong and resilient and they hold the internal organs nicely in place, but with advancing years they lose their resilience, and the result is the pot-belly we see so often in middle-aged and elderly people. Sad, but once the muscles have lost their youthful elasticity there is

nothing to prevent the inevitable sag Even that great youth Falstaff was characterized by thin legs and a pot-belly They are characteristics of advancing years.

Generally speaking it is not advisable to meddle with a man's constitutional tendencies. Every man has his constitutional hang, and it should be respected. Where we can intervene is against excess, but even here we should go warily Once again, it is dangerous to reduce bodily weight by more than 15 per cent.

What is understood, physiologically speaking by work and tiredness?

Just as every machine can expend as much energy as it consumes combustible material to turn the heat into energy so all bodily activity or work, is controlled by the process of oxidation proceeding in the body The food intake is burned up in the organism it produces bodily warmth and enables the body to perform physical activities—in short, to work. The food intake is stored in the body in an easily combustible form (glycogens) to be ready for immediate demands on it—*i.e.*, for immediate combustion. Oxygen is necessary for the process of combustion. It is obtained from the air by the process of breathing, and transferred to the blood, which is then uniformly distributed over the whole body by the heart-pump Thus blood is necessary to any bodily effort, or more accurately blood must be present before there can be any expenditure of bodily energy The greater the work to be performed—*i.e.*, the greater the energy to be expended—the greater supply of blood must be available. There are many and varied differences between the working of a machine and the working of the human body but this necessary blood supply is the most important one. The living organism arranges automatically that everything is ready for the process of combustion at the point where it is required, and it does so by sending to the proper spot whatever quantity of blood seems requisite to the task to be performed. As the quantity of blood available in the human body at any one time is stable, this is done by taking blood from parts where it is not at the moment required and sending it to the part or parts where it is required.

At this point though to my regret, I must remind you of

used becomes atrophied by inactivity Thus use—that is to say exercise—is necessary for all the body's working parts.

But, as in every expression of life, there can be no dogmatism here. We can neither recommend nor forbid as a general principle. It is an individual matter What suits one man doesn't suit another That is the point of departure for the process known as individualization. To be on the safe side, however, one can say generally speaking, that the weaker man, or the sick man, should rest in order to avoid tiredness whilst the strong and healthy man need rest only after and because he has become tired In this way we take into reasonable account the general volume of reserve strength each individual is likely to possess and which each individual must regard if he is not to overdo it. Everyone knows from experience that this reserve of strength varies not only from individual to individual, but also from one season of the year to the other and indeed, from one time of the day to the other

The psychological factor also plays a role, but here we must distinguish carefully between work and performance. By concentration the performance can be increased. For instance, let us suppose that a man lifts a hundredweight. The work done remains the same if that hundredweight is raised in ten instalments. This should make it clear that the work limit and the performance limit are two different things. Here lies the difference, too between sport and gymnastics. In sport the limit of performance is to be extended, whereas in gymnastics it is the limit of work. Sport can naturally lead to over-exertion, whilst gymnastics remain within the innocuous limits of work. Sport aims at setting up records in time and performance It is thus competitive, whilst gymnastics is based on moderate exercise and therefore excludes any over-exertion.

What actually happens when gymnastic and sport performances are increased by training?

Training generally speaking secures the hypertrophy of the muscles by exercise, but that is *de facto* only a fraction of what exercise attains. What training should unconsciously attain is that only those muscles or groups of muscles which are necessary for the effort, whatever it is, are used, whilst all other muscles

and groups of muscles remain relaxed, thus eliminating all unnecessary muscular effort and saving energy. Nature always seeks to achieve its results by two co-ordinating and opposing forces. The active force, or the protagonist, is always opposed by the antagonistic force, the antagonist. The difference of these two forces makes the sum of effort, the performance. In a motor-car progress depends on how much remains of the power developed by the motor after the antagonistic counter force of friction has been overcome. For every positive force the human body sends into action there is a retarding force at work. Training seeks to relieve the positive muscular forces from the retarding antagonistic muscular forces. Thus as his training progresses the athlete will free himself more and more from the antagonistic forces, until finally his whole body is relaxed apart from the muscles, or group of muscles, required for the particular performance he is engaged in. In this way the energy required to perform any movement will be less, with the result that, despite the attaining of a higher performance, the onset of tiredness will be delayed. In other words, "staying power" will have been increased.

Thus what training teaches the athlete is not so much what he must do as what he should not do. It teaches him not to contract muscles which are not required for the work in hand. It is clear that when the available energy is concentrated on fewer muscles, then the work performed can be performed more economically and more effectively, whereas if energy is at the same time expended on the antagonistic muscles it is wasteful and unsuited to the task in hand. To return to my beloved world of music for an example: watch the master at the piano; see how his whole body is relaxed, with the exception of the muscles he needs for his work. And then watch the tyro: see how his whole body is tensed, including his mimic muscles and his toes. It is this secret which explains how it comes about that an old woman can dig potatoes all day long without excessive exhaustion, whilst if an inexperienced athlete tries to do the same he has to give up exhausted long before the old woman. The old woman has learned by long experience to use only those muscles which are necessary for the digging of potatoes, whilst the inexperienced athlete will invariably use all his

muscles at the same time and expend so much energy that before long he has to take a breather He has used perhaps a hundred times as much energy as the old woman.

You spoke of the master at the piano and what you said was true enough, but you forgot to add that when his piece is finished he often collapses into himself like a heap of clothes despite the economic use of his muscles and his arms sink to his side in obvious exhaustion.

That is no argument against what I have said The master at the piano has not only performed a great amount of physical labour with his hands, but he has also been in an acute state of psychological tension. His whole organism has been brought into an extreme state of tension and excitement. The psychological tension is indefinable and lies beyond muscular tension, beyond the technical performance. It is the crown, the actual technial performance is merely the pre-condition of the triumph. As long as any sort of work arouses no impression of tiredness in the observer it is agreeable but as soon as the effort becomes obvious the performance is imperfect. The elegance with which any movement is performed whether it be riding, singing, discus or javelin-throwing, violin playing dancing or golf, depends not on the action itself, but on the relaxation of that part of the body which is not involved in the particular movement, whatever it may be. When this elegance is present, then what ever concentration is necessary appears as masterly ability and not as strained effort. Anyone can run after a sort, but I don't think I am exaggerating when I say that to watch Nurmi run was an artistic pleasure. The same is true of Cotton's play on the links or Gordon Richards riding on the turf. They are the Carusos of their particular metiers

In everything connected with learning the teacher should concentrate rather on what to unlearn than on what to learn. The real capacity of a pupil can be discovered only when he has been brought to abandon all his bad habits. Before that it is impossible to see how far his talent goes. The technique of a movement must become automatic if it is to be really effective. Only when that stage has been reached can the new factor enter into account the "feeling" for the thing, the "soul" of the thing, if you like. Only the man who has completely mastered

the technique of whatever it is he proposes to do so mastered it that it has become second nature, can achieve perfection. He, so to speak, forgets the technical difficulties and free play is left to "feeling" "soul" or whatever you like to call it. From being a handicraftsman he becomes an artist.

What exercises would you recommend to maintain bodily health?

Generally speaking, those sports and exercises are best for health which do not need concentration on any particular set of muscles. As an example of an unfavourable sport or exercise from this point of view I mention cycling. Sports and exercises which involve the whole body are the best, such as tennis, swimming golf and rowing. We are living in an age in which sport and physical exercise are popular—almost fashionable, one might say—and I could count on a lot of facile approval if I came out wholeheartedly in favour of them, but I am not going to. On the other hand, I am not, and I do not wish to be considered as, an opponent of sport and physical exercise. Sport is an excellent education not only for the body but for the character. The famous children's doctor Adalbert Czerny used to say "Sport is necessary if only in order to keep the youngsters from getting up to more foolish tricks". No doubt there is something in Czerny's standpoint, but it does not seem to me to hit the nail squarely on the head. The great benefits which sport has brought to this country have consisted quite as much perhaps in an education in self-discipline, poise and self-confidence as in physical advantages. Physical exercises, or sport in the wider sense, represent a valuable compensation for the tiring hours spent in mental study by young students—I am assuming that the young rascals do spend tiring hours of study. Sport also awakens and develops a sense of healthy competition. Thus I have no objection to sport, quite the contrary—unless it is overdone, and it is overdone if it is practised at the expense of intellectual activity. In proper hands society has nothing to fear from sport, quite the contrary. It is only when sport is misdirected that it leads to brutalization and many other evils. However there are dangers in sport even when this is not the case. Excessive sport, and sport carried out without proper supervision, can be a physical danger to the indi-

vidual. During my long years as a medical man I have seen people crippled for life by sport—that is to say men who have developed chronic heart and other troubles owing to excessive effort and strain in sport. Such cases are exceptional, I grant, but they are not rare enough to dismiss as mere unfortunate accidents. A dangerous factor is the rage for new records. They are often paid for by premature ageing and a shortening of the expectation of life. Any insurance actuary will tell you that the expectation of life of an Oxford or Cambridge Blue is five years less than that of a student who has not been such an athlete. Athletes are favoured candidates for angina pectoris.

Gymnastics are quite a different thing. Every animal needs physical movement if it is to live and so does the human animal. But no animal exerts itself unnecessarily and the human being should keep his gymnastics well within the bounds of exercise. With the exception of the truly sedentary life which condemns its votaries to occupy the seat of a chair for many hours a day almost all occupations and professions offer sufficient opportunity during the course of the day to take systematic movement.

So much for exercise but what about rest? What is the best way to rest?

The resting body needs above all a relaxation of the muscles of the trunk and joints, which give man his erect stance and thus the physical angularity which distinguishes him in the animal world. Maximum rest can be obtained only in a recumbent posture. But that is not the only reason why the resting body should adopt the horizontal position. Another reason is that the circulation must occasionally be freed from the hydrostatic pressure on the blood in the vessels, etc., and on the water and lymph in the tissues. When the body is upright a hydrostatic pressure is constantly operating according to the distance from the soles of the feet to the heart. When the body lies horizontal this pressure on the veins and the tissues ceases. Sitting achieves part of the same effect, but not so completely as lying.

When the body is resting the reserves which have been used up in previous action are replaced and the poisons caused in the

body known as tiredness are eliminated The muscles, glands and the circulatory system which have been exerted in previous action now recuperate to be prepared for further demands on them. A young and healthy human organism has a rapidly rising recuperative curve, whilst sick people, old people and people unaccustomed to physical effort recuperate more slowly This can often be seen clearly in the ring when a tired boxer goes down to a punch, stays resting on the floor of the ring until just before the count, and then springs to his feet and fights on with renewed energy In that short space of time his forces have recuperated and he is fresh, or at least much fresher again.

And what about sleep?

Once we know just what sleep is, if we ever do the analysis of dreams may become less obscure. To-day as doctors all we know about sleep is what artists and philosophers have taught us. It is astonishing that the physiologists have paid so little attention to such an important function. Sleep is undoubtedly one of the most important of all the functions of the human body and it is less easily controlled by the will than any other of our vegetative functions. A natural need for sleep exists, but its degree varies according to individuals. Some people get along perfectly satisfactorily with only a few hours sleep a day Others suffer from pathological sleeplessness. At this point, however a word of warning is necessary In my experience the patient s evidence as to how long he sleeps is usually unreliable. People who suffer from any degree of insomnia are more than a little inclined to exaggerate their sufferings. I used to control the time slept as far as I was able with a time-control watch. Usually it was not long before I received the watch back again Unless there is some unusual and pathological excitement present or perhaps really overwhelming worries, our sleep reflex functions very well on the whole. When there is sleeplessness otherwise, then we usually find that some organic function is out of order—for instance, very often catarrh of the nasal cavities.

However this is not intended to be a dissertation on insomnia, but merely a few remarks in passing on a burning question of the day It is a burning question of our day because in my time I have observed that insomnia is on the increase. As a young

practitioner I was very little troubled by complaints of insomnia, but from 1900 onwards various medicaments and drugs to produce sleep shot up on the market like mushrooms—obviously in answer to an increased demand. My pharmacologist teacher Liebreich started the ball rolling with his discovery of chloral-hydrate. Down to this day I still consider this to be one of the best of the sleep-inducing medicaments on the market. The discovery of the barbiturates by the famous chemist Emil Fischer was the peak achievement of the pharmaceutic-chemical industry and since then there has been little new beyond the names of the various preparations they are all fundamentally derivatives of barbituric acid. It is not impossible, of course, that pharmacological propaganda has done something to increase the sleep need and the sleep requirements of civilized humanity Still, let me not be cynical, there certainly are cases in which these drugs have worked beneficially and with a modicum of care they are not dangerous.

As far as danger is concerned, let me console the over-anxious by pointing to the example of a good friend of mine who has for a long time now been compelled to have resort to preparations against insomnia on account of a harmless but inconvenient tumour on the brain. He started taking them about thirty years ago To-day he is over seventy In the meantime he has consumed literally pounds of the stuff and has done great work on the biochemical field I hope he will remain with us for a long time yet—as he shows every indication of doing—to continue writing his fat tomes.

On the other side of the line there are sleep gymnasts who can sleep when, where, how and as long or as short as they like. Napoleon is reported to have been one. If what they say of him is true, then at least in one respect I resemble him there is no situation in which I cannot sleep I slept equally well in the enormous silence of the countryside, the drumfire barrage of the Aisne, and through the barrage and bombs of the London Blitz. However if I am sleeping through loud noise I invariably wake up as soon as the noise ceases. I have never in my life been awake longer than thirty-six hours at a stretch and very rarely twenty-four hours. I am quite able to follow a lecture or to enjoy music whilst I am asleep Mothers sleep peacefully but

they wake up at the first slight movement of their sucklings. With strict self-discipline a man can wake up at whatever time he chooses. Thus the feeling for time can be kept alive and isolated when all other feelings are at rest. However, the best way to sleep is to surrender oneself completely and unconditionally to one's sleep requirements.

I believe that even in sleep there is a constant interchanging relation between intellectual and physical functions, and that there is a continuity of intellectual activity perhaps along changed lines of association. Byron was aware of this fact when he let Manfred declare

> 'My slumbers—if I slumber—are not sleep
> But a continuance of enduring thought
> Which then I can resist not.

Ideas which have reached deadlock in the waking hours may be revived in sleep, carried on and developed to maturity until they are finally born again whole in wakefulness as sudden inspirations. I can give evidence on the point. I invented, or "gave birth" to a number of valuable things in my sleep—for instance, my sack test, which permits the measuring of the blood gases from the exhalations, my method of lung percussion, a universal apparatus for colorimetry, a safety-cap for high pressure analyses, etc. The Lord gave them to me in my sleep quite literally. It is interesting to note that whilst Zeus slept the virgin Pallas Athene, the Goddess of Wisdom, sprung fully armed from his brain. That has always struck me as a wonderful symbol of the unconscious birth of a higher humanity. In short, sleep is not an interruption of life, but its continuation under other conditions. Sleep has therefore no similarity with death. It is not "the little death" and the phrase *somnus similis morti* is an error.

In sleep the individual is at the mercy of his associates, and there is no finer test of their true characteristics than how they behave to him when he is asleep. The way a man treats a sleeping companion indicates goodness or brutality, love or hatred, or—what is worst of all in the relations between human beings—complete indifference. A decent man willingly grants his neighbours *his sleep*, a bad man envies him his peace. Dis-

trust people who wake you violently and trust those who wake you gently and without shock. They are really considerate for your well being A philosopher once declared 'My servant wakes me by dragging aside the curtains ruthlessly my wife wakes me with my breakfast my children wake me with kisses

It is bad enough not to be able to sleep to the full, but to be awakened violently is a shock to the system which has to be overcome and in the long run no one will be able to stand it. A man should be awakened from sleep and returned to wakefulness with all its paraphernalia gradually A brutal awakening, the shock it gives to the system, can easily be the cause of tiredness during the day The pessimist who sighed "What sort of a day is it likely to be when it begins with getting up?" was undoubtedly a man who was wakened from sleep without consideration. There was once a professor of philosophic jurisprudence in Budapest named Julius Pikler and he was very anxious to formulate the conception of a waking instinct. I often discussed the matter with him, but we could never agree. I denied the existence of any waking instinct. In my opinion it is the gradual filling of the bladder and the increasing need for emptying it which prevents our sleeping indefinitely

What do you mean by heroic classical treatment?

As I have already mentioned in the body of this book, empiric medicine has always used five methods of procedure known as the heroic curative methods. The progress of medical science has not removed the necessity for any of them, and they are likely to continue in use as long as there is a practical medical science They are fasting purgatives, emetics, sweating and blood-letting

The conservative upholding of these five procedures is in no way opposed to the development of school medicine and the progress of medical science. It is a deplorable and arrogant over-estimate of our capacities to throw these tried and trusted methods of procedure on to the scrap-heap as many doctors tend to do to-day The older and more experienced a man becomes the more critical he is likely to be of scientific "progress", but to be critical does not mean to reject. Once a modern

achievement has proved itself there is no one who welcomes it more enthusiastically than the man of experience. Usually such achievements tend to justify older empiric methods or to turn their use into more suitable channels, or to limit their application, or possibly replace them by more effective ones The heroic methods are a permanent phenomenon in practical medicine, and it is the task of modern medical science to give them a scientific basis of operation. An indiscriminate application of these methods is the hall mark of the quack their conscious, controlled and limited application is the task of practical medicine.

What do you think about irregularity in the evacuation of the bowels?

Unless we give the intestinal tract sufficient bulk to work upon we cannot expect proper evacuation. Unfortunately this very simple truth is little understood. Even really intelligent and clever people show no understanding for this simple fact. They grasp it when it is explained to them, but they don t want to understand it. Between their brain and their bowels there seems to be a sort of intellectual barrier They don t seem to realize that there is any connection between the two But it was not for nothing that the Hippocrats launched the conception of hypochondria into the world. If something is in disorder in the stomach, below the diaphragm, the hypochondrium, then the psyche is disturbed in consequence. The Hippocratic school has divided the life of man into three ages in youth a man lives for his stomach in maturity he lives for sex and in his declining years he lives for his bowels Hypochondria is one of the most widespread and devastating troubles from which mankind suffers and is a full-time occupation. Twenty four hours a day are hardly enough for it. I once visited a monastery in which the early morning greeting of the monks to each other was not to wish each other good-day but to announce the result of their attempts to evacuate their bowels, and their voices were joyful or sorrowful according to the result they could report. Their reports were made in classic Latin. The incident was recalled to my mind when I came across the phrase in Burns "Your Latin names for horns and stools"

Unfortunately the successful evacuation of the bowels does not satisfy the true hypochondriac. He wants to produce more and more, and in the end a vicious circle is set up from which he cannot escape. It may arise that almost all the faculties of the hypochondriac are affected and he has only one worry: will the morrow see success or not? And all this although his intellect is otherwise clear! From simple constipation to this deplorable picture there are innumerable stages which merge one into the other.

The strict observation of regularity in the evacuation of the bowels seems to be a characteristic of civilized society. Amongst savage tribes, and even amongst less civilized Europeans, the daily evacuation of the bowels is by no means a necessity nor is it a physiological necessity. There is no need to despair when bowel evacuation takes place at longer intervals than twenty-four hours. In the Balkans bowel evacuation once a week is by no means unusual, and those who function in this fashion are not unhealthy. It is an astonishing fact that a healthy intestinal tract absorbs suitable substances and rejects unsuitable and damaging substances. It is a point to be borne in mind that this selective semi-permeability can be blunted by the chronic use of purgatives.

What I have said in the previous paragraph should not be taken as an encouragement to abandon our daily habits; it is intended merely as a warning to the over-anxious not to get nervous when minor irregularities occur. Incidentally the regularity of bowel movement can be influenced and disciplined by punctually fulfilling various conditions, such as time, or taking certain naturally laxative foods and drinks, such as coffee.

There is another question which is connected with our digestive processes, and that is the generation of stomach gases. The process of fermentation and digestion going on in the bowels constantly produces gases. When the circulation functions properly such gases are taken up by the blood, sent to the lungs and expelled in the ordinary course of exhalation. But if so much gas is produced then the blood is unable to absorb it all and the unresorbed surplus escapes frankly or treacherously in the usual fashion. Flatulence, as this proceeding is called in polite language, is more unpleasant for the sufferer's associates

than it is for himself in fact, he is not a sufferer at all it is they However when this surplus gas formation is connected with a sort of bowel paralysis, then the result can be a very disagreeable distension of the stomach (meteorism) On the Continent this occurrence was not particularly frequent as an object of medical attention, but in England the situation was different, and the phenomenon was of some importance. Another happy result brought about by war time rationing with its changes both in quality and quantity has been the almost complete disappearance of this particular trouble from the doctor's consulting room.

The best and simplest way to approach the problem of constipation is for the sufferer to take plenty of cellulose, or roughage, in the form of vegetable fibres, fruit fibres and wholemeal bread. The best fruit for this purpose is the pineapple. Yes, I know it is unobtainable at the moment, but times will change. There are, of course, cases in which the patient remains constipated *even when he is on a suitable diet and in such cases* nature has provided us with a great many and quite harmless remedies to help us easily over the minor troubles of constipation. In any case, don t let constipation worry you. Boas, the pioneer of our modern ideas about stomach and intestinal sicknesses, said to me when he was over ninety years old and himself suffered from constipation Some people need glasses and others need pills both are harmless

However we should do our best to secure regular bowel action without artificial aid. The civilized life we lead often results in unsuitable food habits, and decay as distinct from fermentation may set up in the bowels, or the process of fermentation may get in disorder with the result that self-poisoning takes place and the unfortunate victim falls ill. For such and similar *reasons, mankind* is never likely to be able to do entirely without purgatives. The enema pump has always been part of the armorial bearings of the medical guild. Modern medical ideas tend to oppose a mechanical evacuation of the bowels, but it is unlikely that practical medicine will ever be able to do without it entirely In my experience when this method is used with moderation and expert knowledge nothing but good has ever resulted

And what about emetics? Do you still think that this procedure should keep a place in modern medical procedure?

Since Kussmaul discovered the stomach pump at the end of the nineteenth century emetics to bring about artificial vomiting have been less and less in use. However the practice of compelling the stomach to contract and secrete by such methods can still be useful. Paracelsus (who used suggestion even in his grandiloquent name 'Theophrastus Bombastus Paracelsus de Hohenheim') regarded vomiting practically as a panacea, and before him the Hippocratics used it intensively not only for stomach disturbances, but also for psychical disturbances—for instance, with maniac depression. I cannot be so enthusiastic about this old remedy as the ancients were, but I must say that in certain desperate cases the violent emptying of the stomach by some such harmless medicament as ipecacuanha or tartar emetic is worth trying In this way and sometimes only in this way the organism can rid itself of certain poisons which would otherwise keep it ill. Vomiting is also a natural protection for pregnant women, and also for people suffering from gout, uraemia and other diseases of chronic poisoning

Why should we despise vomiting as a curative method when we require a cleansing of the body? Sea voyages have the reputation of doing people good. Frankly I would put down a lot of the good done to the fact that the pleasure is often preceded by healthy vomiting in sea sickness. For many passengers an attack of sea-sickness has probably proved just the sort of internal spring clean they needed

And what about sweating as a curative method?

Sweating is an important function of the skin. The skin is the biggest of all the human organs, and at the same time it is the most important regulator of our other functions. Just as every impulse is carried from within to the periphery by the central nerve system so every impulse is carried from without by the skin. Without this mutual relation the absolutely necessary regulation of bodily temperature would be impossible. The regulation is done from a brain centre. The human organism can only live healthily at a certain optimal temperature 97 degrees plus-minus 5 degrees is the bodily temperature at

which life is possible (98.4 degrees Fahrenheit) This temperature must be controlled with the greatest finesse in order that it shall not sink too low or rise too high for life. This thermo-regulation is mainly the function of the skin, and it is carried out by means of sweat-glands. Surplus heat is given off in sweat, which need not necessarily be liquid. By the retention of sweat warmth is accumulated. Everything depends on the proper and prompt reaction of these microscopically small sweat-glands in the skin.

I once knew a family in which the father and two children suffered from rudimentary development of the sweat-glands. It was painful to see their sufferings on a hot day At one time there was a shocking music hall turn for the benefit of a sensation-loving public which consisted of covering beautifully made girls with bronze paint and showing them as living statues. Their sweat-glands were unable to operate through the paint varnish and it was a great effort for them to perform the slow and graceful evolutions the turn demanded, and wherever they trod their soles left wet marks, as though they had just stepped out of a bath. The organism defended itself against this piece of brutality by expelling sweat in great quantities through the only part of the body which was not coated with paint, the soles of the feet. No one could stand this form of torture for very long

Thus the human skin has an all-important function to perform, but although this fact is quite well known the skin is rarely given rational care and attention by its owners. The general tendency is either too much or too little. Fortunately the marvellous thermo-regulatory system of the body is tough and practically fool-proof, so that even grossly bad treatment does not affect it readily Human sweat will find its way out somehow even under the most unfavourable circumstances in order to maintain life or save it.

The expulsion of sweat has another purpose apart from that of regulating bodily heat. The skin is also an organ of elimination, and poisons are ejected from the body in sweat. Popular and traditional medicine has therefore always held the sweat cure in high honour Up to the present school medicine has made little contribution to the problem. That is a great pity because when applied with moderation and knowledge this par

ticular heroic curative method is extremely valuable for ridding the body of poisonous substances. The South Americans have found the right method of meeting their sweat requirements. They all drink *herba mattée* tea. It is far from being a pleasure, for it tastes foul, but in the climate of the Argentine it is a real necessity at least for anyone engaged in manual labour The natives drink it as their national drink the immigrants drink it because it is an imperative necessity if they are to exist comfortably and be able to work hard in such a climate. I have had *mattée* analysed and apart from the usual stimulating substances found in tea and coffee, it contains matteine whose sudorific properties are second to no other specific known to pharmacology It can be recommended to all those whose sweat-glands are not sufficiently active and who are in consequence, inclined to premature exhaustion.

The human skin was discovered by quacks and is now cared for by cosmeticians. Despite the great progress made in dermatological science the study of the relations between the human skin and the human organism as a whole have been rather neglected At last things are changing in this respect. Within its limits the science of hygiene occupies itself more with the skin now than it ever did before. The water cure derives from a shepherd named Priessnitz and Pastor Kneipp the air and sunlight cure derives from a quack named Rickli, who opened his sanatorium in Veldes. All in all it is only about a hundred years that the world has known anything about systematic hydrotherapy Perhaps a century is too short a time, for the world is still not greatly interested in it. Up to the present only Vienna University has had a permanent chair for hydrotherapy It was here that the apostle and founder of scientific hydrotherapy Winternitz, worked I am sure that all that is needed to bring this unjustly neglected medical discipline into fashion again is the appearance of a new enthusiastic apostle.

Hydrotherapy uses both volume and temperature of the water (and sometimes the addition of medicaments) to influence the functioning of the human skin and thereby the organism generally Bathing is a means of cleansing the body At this point let me utter a word of warning prefaced by the willing admission that I should not like to live amongst people who did not take

baths regularly There is a danger in too much bathing There is hardly an animal which willingly wets itself to the skin. Animals are protected from direct contact with the water by hair scales, crusts, feathers and what not even when they go into it. Further there are sebaceous glands which prevent the water from penetrating into the skin. This can be seen clearly in new-born babies. When they are taken out of the bath the water just runs off them like pearls. However such warning indications are ignored by the civilized human being, and he is not content until he has thoroughly removed his natural protective covering with soap and scrubbing-brush. Soaps enter into a chemical reaction with the products of the sebaceous glands and the resultant amalgam is soluble in water Thanks to our own lack of gumption we render ourselves defenceless by scrubbing away our protective layer of skin-grease. I have neither time nor space here to discuss the tremendous amount of colds etc., which are brought about in this fashion.

As I have already indicated, I am in favour of regular baths, for social reasons, if for no others, but I should like to see no more than a mechanical rubbing for cleanliness, and, in any case, people inclined to bodily weakness should avoid soap as far as possible. When they must use soap such people should follow the custom of the ancients in the calvarium and rub themselves in with some animal fat or oily substance in order to give their skin the protection it would otherwise lack. Fortunately very few people take baths as often as they pretend they do. In this respect people's habits are interesting and characteristic. The sophisticated lovers of life take their bath at night before they go to bed whilst the egoistic duty-fiends take theirs in the morning before they dash off to work. The former want to be beyond reproach at night, and the latter during the day

The skin can be cared for not only by means of water but also by sun and light baths. Exercises taken naked are valuable because they give the body a chance of sweating uniformly and not only at the points favoured normally by the absence of clothing It is immaterial whether this exercise is taken in the open air or behind closed doors. The main thing is that if the general temperature of the air is low the body should remain in constant movement. Please don t jump to the conclusion that

me. I was well aware of this when I decided to break a lance against such revered hocus-pocus *Dixi et salvavi animam meam.*

The consequences of excessive fresh air often show themselves in excessive richness of the blood, which can be just as dangerous as the anaemia of the bookworm. Quite honestly I don t know what constitutes the difference between bad air and good air I have made innumerable analyses of the air with the precision gas-analysis apparatus I invented and my invariable results show that the quality of the air in a room not previously aired and with doors and windows closed in a house built solidly of bricks is very little different from that of the open air in the famous Swiss spa Davos as regards both the oxygen and carbonic acid content. That has always seemed food for thought to me Fluegge, my teacher in hygiene, was in such despair about this question of fresh air that he formed a theory that bad air contained a fatiguing element breathed out by human beings, but he had to abandon it in the end. The truth is that in the present state of our knowledge it is as well to be cautious in accepting the wild claims made in favour of ozone" The movement of the air its temperature and its freedom from dust are the chief factors which refresh and benefit us. The actual composition of the air seems to be of very little importance except in extreme cases

What about the sun?

The sun is certainly as we know the source of all life. Radiation biology has kept pace with the development of radiation physics. In this respect there is no need for us to be ashamed of the state of our knowledge to-day But the more we have learnt about the effect of the sun s rays the more cautious we have become. Much still remains to be discovered but what we already know shows that here, too moderation and knowledge are necessary in the use of the sun s rays We know that sun and light must not be prescribed indiscriminately but only when certain definite indications are present and even then only in very definite dosages and with all the necessary precautions against the damage which can be done to the body if it is exposed to short-wave rays

Our bodies rapidly adapt themselves to the differences be-

Well, all we've got left of our heroic curative methods is blood-letting I'd like to hear something about that too

First of all we must remember that the blood volume in a human body is variable and is regulated according to need. Between 5 and 8 per cent. of the bodily weight of an adult is accounted for by his blood. Within the general regulation each organ is provided with the amount of blood it needs according to its function. If the blood channel is enlarged in any particular area there may be congestion. When the total volume of blood is increased, as in the case of arterio-sclerosis, and the veins lose their elasticity this leads to a general overfilling In such cases it is often a wise and beneficial thing to procure relief by blood-letting The importance of assisting the circulation when it needs assistance brought me to my special study of haemodynamics. It would lead much too far here if I attempted to go into details and it would necessarily be too scientific to interest the general reader but let me say one thing which may console over anxious people who have given of their blood during the war to help the wounded all my experience goes to suggest that it will have done these people of middle age far more good to give up a hundred cubic centimetres of their blood than it can have harmed one or two less suitable subjects. Naturally blood letting must be undertaken only on the basis of individual indications and when a preliminary examination has shown that the subject is a suitable one for such intervention.

You hear a lot about blood pressure nowadays What exactly is meant by it?

Blood pressure is a physiological magnitude, like temperature, breathing the pulse and so on. It is an integrative expression for a co-ordinated organic function, and just as there is no pulse disease, or breathing disease, or temperature disease in which these functions are affected as the result of bodily changes, so there is also no blood-pressure disease or sickness. Every change in blood pressure is the result of a general, or at least of a systematic sickness. No reasonable doctor to-day would attempt to treat fever as a sickness instead of treating the causes of the fever the infection, whatever it may be. It is just as nonsensical to attempt to treat the blood pressure instead

of treating the cause behind it. Fever is a warning signal to the doctor to find out what is behind it and treat that, and in the same way anomalous blood pressure is a sign of sickness, and it is up to the doctor to find out what it is and treat it accordingly. Just as the normal temperature is a centrally regulated function and varies with a warm blooded animal around 37 degrees Celsius, so the normal blood pressure is likewise centrally regulated. Fever and sub-normal temperatures are also centrally regulated from the brain except that the measure is either higher or lower but always remains within the limits in which life is possible. If the regulated function in question approaches the danger point either way every possible security measure is brought into play to prevent its exceeding the limit beyond which life is impossible.

If these security measures fail, then life ceases. If they succeed, then life is preserved, but not without cost. Fever brings a lack of appetite with it in order to prevent any over-heating of the body. Sweat breaks out in order to get rid of the surplus warmth produced. Each organ does whatever is in accordance with its function to contribute to the end result, which in this case is to prevent the over-heating of the body. The same sort of thing happens though with different means, when the aim is to protect the organism against any excessive rise or fall in the pressure of the blood.

Now to-day we know that the phenomenon of fever is a protective one and that it aims to overcome the sickness with which the body is suffering. The same is true of blood pressure, and it would therefore be just as nonsensical to rob the organism of its protective measures by some thoughtless application or the other to lower the pressure as it would be to forcibly suppress a fever. The point to be remembered is that in the given circumstances the body can continue to live only because the pressure of the blood has been raised.

The blood pressure of the individual must be respected in all circumstances, and any intervention directed purely against the blood pressure as such is to be condemned as a medical error. If the arteries of the patient have become hardened, then it is impossible for him to continue to live except with an increased blood pressure, and it must be remembered that a satisfactory

compensated sickness is very similar to health, and a man can live on quite satisfactorily with it even though he is subjected to certain limitations. On the other hand, the reduction of blood pressure in cases of arterio-sclerosis robs the body of its compensations, and is therefore dangerous. We can be quite certain that the body knows what it is about when it creates its compensations, but the point in which it is not so accurate is a matter of degree sometimes it over-compensates and at other times it compensates insufficiently In such cases the task of the good doctor is to find the perfect balance, and once again the medical warning should be taken to heart *medicus curat, natura sanat.*

When the pulse is taken, a rhythmic beat is perceived. If these beats, the ebb and flow of the pulse wave, are controlled by a registering instrument, the pressure at which the beat takes place can be determined. When measuring the pulse in this way we find that the pressure declines from its peak until a new beat drives it up again, and that the pressure never sinks to nil, but always retains a certain minimum. In the period between the maximum and the minimum pressure the blood is being driven through the capillaries, until the pulse—that is, the contraction of the heart muscle—fills the arteries with fresh blood.

The blood in the arteries is thus under permanent hydraulic pressure, thanks to the elasticity of the artery walls, under dynamic pressure owing to the contraction of the heart muscle, and under hydrostatic pressure when the body is standing upright owing to the gravity blood pressure which is determined by the height from the ground, a point we have already mentioned previously when dealing with the problem of rest. When the body is recumbent hydrostatic pressure no longer exists When the body is upright it amounts to as much as the dynamic pressure on the soles of the feet reckoned from the height of the heart—*i.e.*, approximately *150 mm. mercury* Maximum pressure shows the dynamic pressure—that is to say the force with which the heart muscle presses the blood into the arteries Minimum pressure shows the pressure which is still present when the next pulse-beat begins. As, however, this pressure depends on the runaway in the capillaries, the minimum pressure is a measure of the condition of the capillary system. To put the matter briefly, the maximum blood pressure shows the strength

of the heart, whilst the minimum pressure shows the condition of the capillaries.

As simple as that all sounds—or does it?—it becomes extremely complicated when one goes into details, as I did in my last book.* All I wanted to indicate here was that the discussion and solution of such questions must be left to the expert, and that amateurish tinkering should not be indulged in At the same time I see no reason why the layman should not be enlightened as far as possible concerning the significance of such and, indeed, all other biological problems. One thing should have been made clear to him by this simplified account and that is that the problem of blood pressure cannot be solved by any generality and that the man with high blood pressure" has not necessarily any more cause for alarm than the man with "low blood pressure' has necessarily any cause for complacency

Blood pressure is the bridge between the soul, for want of a better word and the body and their mutual relations express themselves more obviously here than elsewhere. The decided feeling of elation with strongly beating heart, the feeling of fright when the heart 'beats in the throat" and the negative feeling of depression when "the heart has fallen into your boots" —all these feelings and every feeling in between are communicated by the blood pressure.

From the practical point of view the most interesting disorder on this field is arterio-sclerosis, and because old-established but nevertheless erroneous views still persist, not only amongst laymen but also amongst doctors, I propose to say a few words on the subject. The first idea that must be combated is that arterio-sclerosis is a disease of age which must inevitably lead to death. Widespread statistics collected during the first world war and continued during the second have revealed the startling fact that no less than 60 per cent of the men between the ages of twenty and thirty who died suffered from arterio-sclerosis of the great and specifically coronary arteries. As, however only 7 per cent. of them actually died as a result of this arterio-sclerosis, it is crystal clear that the trouble had either healed up in part or had come to a harmless standstill. In short, arterio-sclerosis is

*"The Blood Pressure and its Disorders, including Angina Pectoris" Professor Dr J Plesch, Baillière Tindall & Cox, London, 1944.

not the desperate and hopeless progressive disease of old age that most people think it is. Further it is quite definitely curable.

Arterio-sclerosis as the result of advancing age need be taken no more seriously than presbyopia, the progressive far-sightedness which also sets in with advancing years. This optimistic viewpoint may astonish many people, and I have no doubt they will be no less surprised when I tell them that the sclerosis itself is not the trouble at all but a compensatory form of cure for the real disease which underlies it, arterioatonie. Arterioatonie is a condition in which the arteries lose their elasticity and are no longer capable of adequately resisting the pressure of the blood. In this condition they are subjected to over-strain, with the result that microscopically small splits and cracks develop and these, as in the case of certain other persistent and chronic diseases such as tuberculosis, finally heal up after passing through certain intermediate stages (atheromatose), by sclerosis or calcification.

This distinction is no matter of hair splitting but a very important difference, because in the first place any infection, poisoning mental depression or metabolistic disorder must be examined with a view to discovering whether they cause a weakening of the arterial walls and a weakening of the muscular tissue and secondly because it obviates the foolish effort to dissolve the chalk in the arteries, and indicates that the exact opposite is the effect to be aimed at—namely the assistance of the organism in its task of bringing about the requisite calcification. Here is a field on which vitamin treatment can prove very successful.

To conclude, the problem of blood pressure is a very complicated one, and it is impossible to go into full details here. The layman should be satisfied with the general and somewhat over simplified, explanation I have given him here, and for the rest he should be content to let the doctors rack their brains over the problem.

I take it then, that you regard the science of medicine as something indivisible?

Yes, I most certainly do. Medicine is as indivisible as the physical functions themselves. Of course, there are functional

units, such as the digestive organs, the urinary system, and the central nervous system, which can be more or less delimited, but they, too can function only in co-operation and co-ordination with all other parts of the organism as a whole. Unfortunately a limited understanding of this whole problem, a failure to appreciate it as a whole has produced a tendency to regard these various organs as though they were separate entities, and to treat them as such. This attitude has led to the over-specialization of the medical profession in our day The part was, so to speak, torn out of its context and regarded as something independent of the whole In the search after the individual bricks—and beyond even those units to the atoms of which they are composed—the building itself—that is, the human organism as a functioning whole—has suffered neglect. By paying too much attention to the grain of sand the pillars of the edifice, its statues, and in the end the whole Parthenon has been lost to view Of course, the whole Parthenon is made up of innumerable grains of sand but innumerable grains of sand add up to the Parthenon only when they are harmoniously brought together to that end

Naturally the study of the basic elements of any edifice is useful and even necessary and it is not that study against which I protest, provided that the knowledge so won is organically connected with the whole to which the elements add up A watch consists of so many wheels, cogs, springs and other specialized individual parts, but the watch is only a watch when these parts are there in proper relation to each other when they form together an organic integral whole. The elements are highly interesting but their real significance is achieved only in their co-ordination in the watch as a whole. Thus in medical practice specialization is a danger because it tends to an isolated study of individual organs and a neglect of the relation between the individual organs and the organism as a whole. The all-essential correlation should never be overlooked. For this reason I am firmly convinced that the only justified speciality in medical practice is for a man to be no specialist.

Various curative methods are highly specialized what about that?

It is certainly confusing to the layman to hear of so many different methods of treatment as allopathy homoeopathy

quantities of metallic and other substances which do not themselves take part in the reaction, catalysis, has developed in our day into an important branch of science. Was it this which caused him to favour the use of minute dosages, or was it really the belief that means should be applied which produced similar symptoms to the sickness to be treated? Or was it both? It is *not easy to decide from his writings. But one way or the other* the recognized so-called Schultze-Arndt principle for medicamental effects lays it down that medicaments given in small doses have the contrary effect to the same medicaments given in large doses, and it therefore provides the scientific justification for Hahnemann's views.

Most certainly homoeopathy has committed a sin of omission in not scientifically developing the lessons taught by Hahnemann. Homoeopathy picked the currants out of the bun, so to speak, and did nothing whatever to develop the lessons of its founder still further. Otherwise it need never have let vaccination, immunotherapy and serum treatment be taken out of its hands. All these medical disciplines operate with even smaller dosages and still higher dilutions, where that is at all possible, than those prescribed by Hahnemann himself. Incidentally it is an error to believe that homoeopathists always operate with very small dosages of "potentials" for sometimes they prescribe very strong poisons in quantities which, although they are absolutely small, are nevertheless greater than an allopath would care to prescribe without misgiving.

As far as I am concerned I have taken what I considered useful from the armoury of the homoeopathists, and I have nothing in principle against homoeopathy though I have sometimes had to cross swords with individual homoeopathists. Others, on the contrary have been valued and highly-respected colleagues. Hahnemann did what many other successful men have done, he took to himself a young wife at an advanced age, eighty to be precise. That is not a good thing it falsifies a man's whole life—and greatly increases his expenses. To meet these greatly increased expenses Hahnemann opened up a fashionable practice and all hysterical Paris streamed into his consulting rooms. In this latter period of his life I am convinced he obtained greater success by the suggestive effect of his name and person-

ality than by his knowledge. Unfortunately homœopathy recruits its adherents primarily from amongst those who have more confidence in faith than in knowledge. And amongst these the main contingent comes from the ranks of the upper ten thousand. They give the tone, and they are followed by mobs of others from snobbery rather than conviction. In consequence the specialized existence of this particular discipline is assured for an indefinite period.

I made the acquaintance of homœopathy whilst I was still a student. Budapest was the only university which had a chair of homœopathy. My teachers were Professor Bakody and Professor Balogh. Professor Balogh was recalled to my mind a little while back in connection with the epochal discovery of penicillin by the bacteriologist Fleming. This substance, a vegetable mould product, is very effective against certain infections. Professor Balogh used to treat intestinal catarrh with diluted extract of meat mould. Later on I came into contact with Dr Roehrig of Paderborn, who was the doyen of homœopathists in Germany at the time. Patients from all parts of the world filled his consulting rooms and he polished them all off with the same curt brusquerie. As soon as a patient entered his inner sanctum he would snort "Sit down." And if the patient, indignant at being hectored, then pointed out that she was the Countess so-and-so, he would snap still more fiercely "Then take two chairs!"

Roehrig was a thoroughly experienced and conscientious practitioner. As early as 1899 he had built his own Roentgen apparatus, and with it he was able to make rapid and accurate diagnoses. By 1911 he had fallen ill of a Roentgen cancer, and he came to me and became my patient. I treated him for many months—not with homœopathic methods, and he was very glad to take the alleviating medicaments I prescribed in full and effective dosages. From that time on my reputation amongst the homœopathists was firmly established. Thanks to Roehrig's obvious confidence in me, they came to regard me as a sort of super homœopathist, and I was often called in by homœopathists as a consiliarius. They were a very mixed lot, and later on I had difficulty in keeping some of them at arm's length, but at least I had a unique opportunity of seeing their cards face up on the table.

We hear a great deal about suggestion nowadays what do you think about it?

Most of what can be said about treatment by suggestion as such is also true of Christian Science. Any mental concentration on a definite organ can influence its functioning just as surely as sensory impressions can. Disgust causes a man's stomach to turn over Fright chills the blood in his veins. Elation makes the heart beat stronger Mortification can cause the gall-bag to run over and so on. In the same way concentration, confidence and 'faith" can work 'wonders in a suitable subject. People who have been cured in this way then club together to form a society of enthusiastic propagandists and proselytizers—until some close and beloved relative who might have been saved by medical intervention dies of cancer or something of the sort. This does mean that I am opposed to the use of suggestion in fact I have sent more than one of my psychoneurotic patients to places like Lourdes or to Christian Science practitioners Sometimes such methods can cure patients where my own efforts have failed, and that is all that matters. However these are exceptional cases, and I must confess that I feel more confident and comfortable when I can stand with two legs firmly on the solid basis of proved medical science, and I consent to leave this basis only when it is obviously unable to carry me any longer

And what about psychoanalysis?

Someone has said that the doctors envied the priests the institution of the confessional and so they invented psychoanalysis. As not only the evil deed but the very thought of the evil deed—evil thought—falls within the province of the confessional, the Catholic Church has been practising psychoanalysis for a good many years now just as the first quacks undoubtedly practised psychotherapy Both saved the honour of those doctors who healed thanks to their personal influence, their power of conviction and their suggestive force. Before the honourable establishment of psychotherapy their jealous colleagues were greatly inclined to dub them charlatans.

If we regard mind and body as two equal partners in the mutual relations we call life, then we can certainly not regard

the treatment of the mind, or soul, as superfluous. The greatest achievement of psychological research is that it has brought some sort of order into the previous chaos of our psychological knowledge and our methods of psychological treatment. With this it made it possible to separate the chaff from the wheat, and to raise the confused medley to the status of a science. One of its pioneers was Eduard von Hartmann who drew general attention to the unconscious automatism of life with his "Physiology of the Unconscious" around 1880 The originator of psychoanalysis was the typical Vienna coffee house addict, Breuer My teacher Kraus, knew Breuer personally and had spent many evenings with him in the Vienna cafés discussing the subject. Breuer was a man of great intellectual ability and richness of ideas. He published some of his conclusions, but most of them he let fall in the cafés of Vienna for the sparrows to gobble up He attached great importance to letting a hysterical patient talk himself out, and he documented the beneficial results of such treatment.

It is no denigration of Freud to say that it was the germ of Breuer's ideas he snapped up and developed into full bloom. At first Freud suffered many humiliations at the hands of orthodox medical men. His views led to his shall we say mildly "removal" from the membership list of the old-established and honoured medical association "Gesellschaft der Aerzte" I was elected a corresponding member of this society and at one of its banquets, at a time when Freud's fame was already firmly established, I dared to question the President of the association under whose auspices Freud's membership had been dispensed with—though I waited until we had both had a glass or two of Gumpoldskirchner first. This was Professor Wagner Jauregg, world famous for his research into thyroid-gland diseases, the discoverer of the malaria infection treatment for progressive paralysis, and Nobel Prize winner With the frankness of a jovial Styrian peasant he declared "Well, you know a chap doesn't get to my age without having done a lot of silly things, and when I went for Freud in those days, that was one of the silliest things I ever did. And that's all there is to it."

Medical men are a curious lot. In their heart of hearts they are very much inclined to imagination and fantasy but they are

ashamed to admit it. Passionless exactitude finds recognition before the most valuable fantasy In consequence they are very *keen on statistics. There is hardly a medical dissertation which* is not well sprinkled with statistics. Freud had no statistics, and in consequence the medical publishers were unwilling to print his stuff. It was a long time, a very long time, before he won medical recognition for his work. He made his career in the beginning thanks primarily to his ability as a writer His first public recognition came not from the medical profession, but from the literary world, whose leaders crowned his writings with the Goethe Prize in Frankfort-on Main. Only then did the *medical world begin to pay proper attention to his work*, and it can truthfully be said that Freud spread his daring ideas *throughout the world by his masterly dialectic. His writings* are often poised on the finest balance between the sublime and the ridiculous, but he always retained his balance, and in the end he was taken seriously

If the criterion of genius is the general effect of a thought, then there is no doubt that to-day there is hardly a field of science, hardly a sphere of human thought, which has not had to revise s ideas in the light of Freud s principles. *From this point of* view one can class Freud with Descartes Locke, Spinoza, Kant, *Darwin, Nietzsche and Einstein. Perhaps the mention of* Nietzsche s name in this connection may appear inappropriate. *It is not altogether so I think, for the logical and ruthless pur* suit of the Nietzschean ideal led to bestiality in human relation ships, whereas Freud with his better understanding of humanity opens up the way to reconciliation, and in the end it may lead to a more tolerant and a better world. There is no doubt that to-day our moral ideas and our jurisprudence are both being subject to revision in the light of Freud s ideas.

It is possible to disagree concerning the therapeutic value of psychoanalysis, but one thing is quite indisputable with the *help of psychoanalysis we can deal successfully with certain* psychical symptoms. However what is the use of disposing of symptoms *if the constitution, the basis on which the symptoms* have appeared remains unchanged? In the best case another symptom will appear and the utmost *we shall have attained* will be the replacement of one symptom by another and, perhaps,

less disagreeable one. At the same time we must not underestimate the dangers connected with psychoanalysis. It can cause trouble. In particular there is a very real danger that the patient may fall into a dependent relation to his analyst, and that is not so easily remedied Just as the physical body is protected by several defensive strata, so is the soul, and one should make the attempt to penetrate beyond them only in cases of extreme urgency With ordinary physical surgical operations the normal condition is never completely restored. In the best case a scar remains. And so psychological operations bring about changes, and thus should be risked only when the stake is worth it Mental wounds can also become infected and complications can arise. Therefore the analyst should not penetrate more deeply than is absolutely necessary and as far as possible he should confine himself to the focus of the trouble The Jung methods of complex determination offer us a better chance of placing the exploratory finger on the very seat of the trouble and thus localizing the operation.

The analysis of dreams must also give rise to misgiving The dream reveals the complex in its sheerest form. The dream is the unconscious association of physical or mental distress, and accordingly it becomes either a compelled reflex or a wish dream. It must not be forgotten that in sleep not only do the organic functions continue to operate, but also the brain, although in sleep it operates under the surface of normal consciousness. When the accumulation of stimulation reaches up to the surface of consciousness we awaken Consider this process in connection with the gradual filling of the bladder As I have already pointed out, we are woken up by a physical need. Of course, there are bed wetters, but in such cases either the level of consciousness lies too low or the sphincter muscles are weak.

The sexual dream is a typical reflex dream, a purely regulative automatism of the organism. Every organic function has a psychic superstructure, and in the same way every sickness has its own specific psyche. These are certain general principles which are no longer the subject of dispute. But we immediately get into difficulties when we have to go from the general to the particular in the case of purely individual psychological associations in a dream. It is one of Freud s great services that he has

dared to penetrate into this field. I marvel at his courage even when I am often unable to follow him in his vague assumptions on so many points. However the great thing is that a beginning has been made and a new field is now open to scientific investigation.

What do you think of surgical intervention?

Surgery is a very much over-rated branch of medical science. It tends to leave the ideal path of medical effort rather than keep to it and it is not sufficiently conservative in the true sense. The highest task of medicine is to keep the human body in its natural shape and to natural functions, and not to mutilate it as surgery does. The successes of surgery live on to talk about themselves, the failures are quickly buried. With cleanliness and blood stilling almost any surgical daring may be undertaken. The human organism is very patient, and it adapts itself to new conditions with extraordinary facility. It adapts itself in the same way to operative mutilations—and it often succeeds in doing so despite the surgeons.

Surgeons have contributed relatively little to the development of medical science, though most of them regard themselves as the head and fount of medical creation, just as the pathological anatomist regards himself as supreme in medicine. I have known most of the great surgeons of my day and they were all beneficiaries of bacteriological, physiological and pharmacological discoveries. Thanks to these discoveries they became "Titans of Medicine"—without having played any greater role than that of competent craftsmen. Hardly one of the many great achievements of medical science is due to a surgeon. As craftsmen and technicians I am prepared to raise my hat to them and be thankful to them for their assistance when the worst comes to the worst, but that is all I demand of a surgeon. For medical purposes a doctor certainly need never turn for assistance to a surgeon. I readily admit that I have known many surgeons whose personality was impressive, but I hardly knew one whose knowledge was in any way out of the ordinary. Surgery is applied science—the applied science of others.

In uttering this criticism of surgery and surgeons I have had the leading surgeons of what might be termed the heroic age of

surgery before my mind's eye men like Billroth in Vienna, the father of Central European surgery He was the first to attempt an operation for cancer of the stomach—but only after the chemistry of the stomach had been explained by Heidenhain and van den Velden with the assistance of Kussmaul's stomach pump, and after Boas had demonstrated the presence of lactic acid in the stomach cancer Billroth's successor was Eiselsberg, also of Vienna. Encouraged by the research work of Brown-Sequard, he proceeded to operate on the thyroid gland, though without success, because he removed not only the thyroid but also the para thyroid gland being a good and conscientious operator whereas Kocher in Bern, who was not such a conscien tious technician, failed to remove it altogether Kocher's test animals remained alive because he left their para-thyroid behind, but he received the Nobel Prize for all that. Griesinger Munck, Wernicke and Anton had made a thorough study of the brain before Bergmann dared to operate. Lord Lister first mastered the bacteriology of Pasteur and then applied sterilization to surgery with results that astounded the world. Others went still further in their attempts to prevent infection, and it was Mikulicz who first introduced mouth and nose covering for surgeons.

Bergmann's successor August Bier always struck me as a medical illiterate. He prided himself on being a man of iron logic" Perhaps he was, but unfortunately his premises were false, as is the case with most quacks. What quacks say is usually wrong but what they do is sometimes brilliantly right. Sauerbruch's pneumatic chamber was an error just as were his other proposals for pulmonary surgery Hermann Strauss, *Alexander Koranyi* and *Paul Friedrich Richter* worked on func tional kidney diagnosis, and on the basis of their results Israel in Berlin performed his kidney operations. De Bassini in Padua was an anatomist. Apart from those I have mentioned I have known a host of others, but only Nicoladoni of Graz stands out in *my memory* It was he who had the brilliant idea of displac ing living muscles to perform new tasks in the lame. But even this, although a great achievement, was more of a technical one.

Perhaps after all this it may be thought that I do not recognize the real blessings of surgery and the technical progress it has

made in recent years This is not the case I am perfectly willing to give surgery its full due, but what I will not do is join in the chorus which praises the surgeon as the crown of medical creation. Such praise is unearned. The surgeon must be satisfied with that modest place which his own achievements in the cause of medicine truly entitles him to. The surgeon is a good and useful soldier of medicine, and his job is to carry out the operations the General Staff of medicine has decided on. He is not the beginning he is the end.

What do you think of the mystic and transcendental forces which are said to play a role in medicine?

I certainly have one or two interesting and amusing memories. On many afternoons in Rome I took part in spiritistic seances in a special room in the Hotel Quirinal. The life and soul of these seances was Princess Odescalchi, an old lady who lived in Rome and was very keen on keeping well in with her forebears. She conjured up the souls of her dead-and-gone relatives whenever she could, and the table would jolt, shudder and jump in time to the orders of whatever uncle or other relative from the other side was appearing that day Quite apart from the Odescalchi family and particularly its Austrian line, there was hardly a great figure of history from Nero to Napoleon whose eternal rest was not disturbed by this persistent old lady All of them were assumed to have a knowledge of current events and had to undergo an appropriate examination. They were not always pleased at this and they often expressed their annoyance violently the table would buck like a yearling being saddled for the first time. Sometimes the scene would be so wild that we gave each other unintentional bruises, but it was all taken in good part and no complaints were made. The amusement was worth a bruised shin or two

Spiritism was all the rage in those days. The movement really started in Sweden, where for the first time it had proved possible to hypnotize suitable mediums. Psychiatrists then adopted this method and the human imagination exaggerated successes and materializations to wild and fantastic lengths. The whole of Europe fell victim to the suggestion of suggestibility and France in particular went positively hysterical. Each country had its

famous mediums, and both honest and dishonest elements mixed together in this witches sabbath. For the scientist a new field of investigation had undoubtedly opened up, particularly when the objective and highly reputable physiologist of the Sorbonne, Charles Richet, and the equally serious scientist, Marcelin Berthelot, the inventor of calorimetry pronounced a decided *non liquet* in the case of spiritism.

The French Academy appointed a commission of three, of which Richet and Berthelot were members to investigate the question. To remove their investigations as far as possible from all outside influences they were all shipped, together with their medium, to the Château d If near Marseilles, made famous in Dumas novel "The Count of Monte Cristo" The members of the commission witnessed various strange phenomena, such as levitation, spontaneous winds, strange noises, etc. none of which were amenable to ordinary explanation despite all the tests and precautionary measures adopted. They were unable to come to any satisfactory conclusions, and in a cautious report they admitted that they considered the existence of a fourth dimension to be a possibility

And down to this day theirs is the only reasonable attitude to take in this question. It would be deplorable arrogance in us to assume that our knowledge of existing energies is already at such a pitch that no further development is possible. I think there is little doubt that we shall live to witness more than one epoch making discovery in this respect. How much would have been left of the signs and wonders of the ancients if they had been acquainted with electricity and radiation? One thing is clear the more science advances in its knowledge the less room there will be for "wonders" Something the last something, will always remain, however To adopt a negative standpoint and to declare that everything is humbug is as false and unscientific as to accept all the spiritistic phenomena as proved.

It is too easy to point to the wireless mast as an explanation of telepathic phenomena. Such phenomena are not everyday occurrences, but quite exceptional There are certainly controllable telepathic communications which work with a broadcasting and receiving system, and on which the continued existence of worlds depends. One need only point to the epoch-making

discoveries of Favre in connection with insect life. Here we can see, for instance, that there is a mass consciousness of the species as a whole in the butterfly world which not only maintains contact between the two sexes, but directs their whole life and activities Science has not the faintest shadow of an explanation for these experimentally controllable and reproducible phenomena.

Anything we cannot explain satisfactorily with the knowledge available to us is embarrassing For small souls the best way out is to deny the existence of anything we don t know all about. But riddles cannot be eradicated from the world by the arrogant decree of those who are unable to solve them. Instincts, affinities and tropisms all go beyond the bounds of our present scientific knowledge. No one knows how forces are transferred here, but we are quite satisfied because we have found a name for the process.

Undoubtedly there are those who make capital out of credulity in all mysterious things, and when such charlatans are exposed the little positivists triumph. They jump at the opportunity to damn the whole thing because some individual has brought discredit on it. Abuse of spiritism by unscrupulous mediums has always taken place. In Italy for instance, there was the medium Eusapia Palladino She was presented to us by the Roman Professor of Physiology Luciani, his friend, a professor of bio-chemistry in Naples, and Barzini, the famous reporter of the *Corriere della Sera*. It was an impressive sight to see the curtains billowing out (although all doors and windows were closed) and the chairs dancing Everything went according to plan in the seance before the two sceptical University professors. But the good Madame Eusapia was later exposed by Barzini, who demonstrated that the hand of Napoleon conjured up by a member of the audience was in reality the foot of Madame Eusapia herself.

However such abuse by unscrupulous mediums is not convincing proof that unknown phenomena do not exist. Once again Hamlet was right 'There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy' The miracle, according to Goethe, was the favourite child of belief. Perhaps he is right, but in the future it must be the still more

favoured child of science in the sense that much attention must be bestowed on it. Pascal favoured the golden mean "*Deux excès exclure la raison, n'admettre que la raison*" But Pascal would have been wrong to suggest that the two excesses were of equal enormity To exclude reason is far worse than to admit only reason—despite Bergson.

The reading of the hand, chiromancy character reading from the handwriting and clairvoyance are phenomena which are not necessarily transcendental. There is little doubt that there is a relation between the character and the form of the hand. By careful study such as that conducted by Dr Charlotte Wolf and laid down in her writings, chiromancy can be given a more positive basis. The form of the hand is just as characteristic for certain constitutional peculiarities as the expression of the face, or indeed, any other physical characteristic. The ground begins to become a bit slippery under the feet when on the basis of an often true proverb "Everyman is his own lucksmith" we proceed to form conclusions as to character from morphological indications, and then, still further to draw conclusions as to coming events.

Handwriting is undoubtedly the expression of unconscious happenings Handwriting can betray both a bodily and a mental state. Trousseau spoke of an "asthmatic writing' and a "heart disease writing" The handwriting of a paralytic is of value in diagnosis. But all such indications must be treated with caution and without prejudice, or mistakes will easily occur I can remember one such case—an amusing one, as it happened. Whilst I was a young assistant a colleague of mine named Schittenhelm had the task of placing the most interesting cases in the polyclinic before our chief together with the diagnosis. He was accustomed to write the name and other particulars of the patient on a piece of paper and pass it over with the whispered diagnosis. In one case the diagnosis was "paralysis" Our Professor Kraus misunderstood him on this occasion, took the piece of paper put it under the epidiascope and proceeded to demonstrate to us all the characteristic attributes of a paralytic's handwriting—to our great delight and to Schittenhelm's horror

In all cases our guiding principle must be "without preju-

dice Very few people have the gift of interpreting the delicate signs of psychological processes objectively I believe in the possibilities of graphology but I have little confidence in most graphologists. A sixth sense is necessary for accurate results. A graphologist who certainly seemed to possess a sixth sense was Raphael Scheermann of Cracow He was a peculiar character and not particularly blessed intellectually or imaginatively nor did his appearance suggest any out-of-the-ordinary ability When he was given a graphological problem to solve he would fall into a sort of trance with the writing before him, and in that trance his enormous capacities for accurate interpretation were revealed. The writing on the paper before him seemed almost to open up the secret places of the heart of the writer the secret places of the heart and the innermost recesses of the brain Letters written by people who were total strangers to him but well known to us were placed before him, and without hesitation he described them as we knew them—and very often far beyond our knowledge.

I became very friendly with him, and from time to time I would drop him a line, usually post-cards. Back would come long letters of careful analysis—all based on the few lines I had written. He analysed my experiences and told me what I should best do and best leave undone in the psychological state which my cards showed me to be in to his unerring eye. On the basis of the handwriting of my chauffeur, who had been with me for fourteen years and who enjoyed my complete confidence, he exposed the man as a crook and revealed all the tricks he had been up to I could write many pages about Scheermann and his great gifts how he intervened in complicated legal disputes, how he influenced men and their fates, how he was consulted by people from all parts of the world even by courts of justice, and so on, but that would lead to a monograph about Scheermann, and as interesting as that would be all I am interested in here is how graphology might be used to assist in medical diagnoses.

Scheerman himself wrote books and some of them have been translated into English. I have read them all, but after having read them I am more than ever convinced that his ability was purely intuitive and that he was not in a position to teach anyone else to do the same. The basis of graphology is too insecure

for the moment to permit of its being learnt systematically as a science. Scheermann was a unique phenomenon, but that is no basis for a science. Incidentally he was an ardent Polish patriot, and despite the warnings of his friends he went back to his beloved Cracow. I have heard nothing of him since the outbreak of war. Perhaps the Nazis have also destroyed this genius.

You suggested earlier that if Freud had not made sex his point of departure he might have achieved still more. How do you stand to the sexual problem?

If we regard the aim of life as first to preserve oneself and then to perpetuate the species, it is clear that the sexual problem must be regarded as at least one half of man's earthly existence. The sexual problem is therefore worthy of an important place in our investigations. Above all, sexuality should be freed from the old mystic veil in which it has too long been wrapped. Society must cease placing its taboo on attempts to solve the problem. Sexual secrecy is the hotbed of immorality. Sexual science—we can already speak of the systematic work to bring light into this vexed problem as a science—has made great progress in recent years, but owing to the prudery and prejudice of society it has been difficult to put the knowledge gained to practical effect. The biggest triumph of the women's movement was that it succeeded in securing recognition for the equality of the sexes. Oriental subjugation, which was by no means confined to the Orient, has been brought to an end in the civilized West: women are no longer slaves. And, what is more, they are no longer old: the old lady with bonnet and bugles has disappeared. Woman has won the right to live her life to the full according to her desires and needs. In fact, the process has even gone so far that a new class of male prostitute has arisen. I don't mean the homosexual prostitute, but the gigolo, who has become almost as much an institution as his female counterpart. This is not an expression of moral judgment, but a simple statement of fact, and it is not the least use for prudery to shake its head: the fact remains.

The whole sexual problem would be very much simplified if the sexual act were a mere necessity instead of being an act of desire. In the animal world, with its more or less seasonal urges,

the sexual act is a simple reproductive act. This is not the case with human beings, who are privileged by the possession of reason. A human being has an advantage over the animal in that he can impose inhibitions on himself. He is moral when his social inhibitions are stronger than his sexual urge, and he is immoral when his sexual urge is stronger than his inhibitions.

If a man is hungry and he steals bread the motive is so extenuating that the act goes almost without punishment, but the law is not prepared to show the same tolerance towards the illegal satisfaction of the sexual urge, be it ever so great. In the one case the action has no further consequences in the other it might have From this it results that sexual relations need some authoritative control they must be regulated. However such control should limit itself to the protection of an unwilling partner and to the maintenance of everyday morality In other words, if the sexual act is performed to the detriment of no other person, if it is conducted in suitable privacy and if it offends no feelings of public morality the law has no cause to interfere. All these conditions are most naturally fulfilled in the institution of marriage, but they can also be quite satisfactorily fulfilled outside the bonds of lawful wedlock, and as disagreeable as the thought may be to Church and State, long long experience has shown that extra marital sexual relations cannot easily be prohibited or even morally outlawed

One of the cardinal problems which any post war period always brings with it lies on this field. The war separated many married couples, often for very long periods. Will they come together again, and will the marital ties continue to be borne willingly and permit the continuation of domestic harmony? In many cases the circumstances brought about by the war have led to the formation of new extra-marital, relations. Deep and joint experiences have often made these relations stronger than the old legal ones. The situations created in this way are of dramatic variety and often they put the imagination of the author and the playwright into the shade.

The doctor is faced with his share of the problems created, and hardly a day passes but that some example presents itself to him in his consulting-room. War loosens moral bonds, and the post war period is likely to be faced with many more such

difficulties owing to the spread of a freer conception of sexual morality The most common factor which leads to marital troubles is that two people who have come together in marriage find that they are really unsuited to each other sexually During my Strasbourg days the gynaecologist Fehling made a statistical investigation into the problem of sexual frigidity in the local female populace. The result was interesting enough to be quoted. It showed that approximately 30 per cent. of the women of Alsace were sexually frigid. Another 30 per cent. were slow to react sexually and difficult to satisfy About 30 per cent. were normal in their reaction whilst the remaining 10 per cent. were over-sexed. I believe that these proportions may be said to apply quite generally to the women of civilized countries, though, of course, there are undoubtedly differences of geographical and climatic situation, race, nationality and so on and these would bring about minor variations as between category and category However the main fact would always remain, and that is that women are very differently constituted both in their sexual reactions and in their sexual needs.

The natural tendency of women is towards masochism, whilst the natural tendency of men is towards sadism. In her love life the woman requires a certain amount of sadism on the part of her lover She likes to be ill treated up to a point, to feel pain, and she is grateful for it. The man will unconsciously comply with this requirement of his beloved. As long as these natural appetites are kept under control, love is a happy affair But when such tendencies are perverted or carried to excess, then tragic conflicts develop Generally speaking one would not be far wrong in assuming that when love ceases to be a happy affair and becomes tragic and elegiac, then the cause is some lack of sexual suitability The simple fact that people get divorced should not give rise to prejudice, but should be a warning that something is wrong on one side or the other—or both.

One of the many difficulties of the sexual relation is that women even quite normal women, often develop late as far as their sexual feelings are concerned. Generally speaking, on the other hand the sexual feelings of men are more regular in their development, though there can be a great disparity in requirements as between one man and another What is lacking in

most men is mastery in the *ars amandi* an ability which is able to compensate for a great deal of lag in the feelings of women. The literature of most countries contains classic examples of advice in this respect, the best known of which is probably that given by van Svieten, the founder of clinical science, to the Lorraine husband of Maria Theresa. Unless the man is an artist in love, the woman is likely to suffer The happiness of many marriages has been assured by this art. There is, I believe, an old English saying to the effect that if the bedroom isn't right, not a room in the house is right. It is very true.

Sexuality should in the last resort be of an altruistic nature the one partner should give as much as he receives. The *homo solitarius* is a pitifully egoistic being No man should be content with dropping into Cupido s as a mere bar guest. The richly decked table of Venus should be enjoyed at leisure. With the thinking being sexuality is not a mere spinal reflex, as it is with the frog who continues to perpetuate his species even after brain, head and all, has been removed. The spinal centre in man is subordinate to the brain, which can both inhibit and stimulate, *excite or calm. The thinking man can obtain excita*on and he can experience undesirable inhibitions. There is no greater enemy of sexuality than excessive brain work, or worry The best and most effective aphrodisiac is physical and mental serenity Sexuality exists on the surplus energy of the body If that energy is expended in other ways, in excessive physical exercise, for instance, then very little is left for Venus. Perhaps that was why Nero regarded coitus as the only form of gymnastics suitable for a gentleman, other physical exercise being fit only for warriors and slaves.

There is a prejudice of long standing which affects to regard sexuality as an affair of mature years only Sexuality in child hood and in old age is generally regarded as being decently non-existent in the one case and disgusting and improper in the other One of Freud s great services to the cause of sex enlighten ment was his discovery of the indisputable existence of sexuality in childhood. One of the most valuable and illuminating of all his analyses was that of a five year-old boy Nowadays there is very little doubt left that sexuality is born with us and stays with us in one form or the other to the end of our days. The narrow-

ness of the old prejudice is due perhaps to the fact that sexuality is identified with the sexual act. This need not necessarily be so Male potency and female ovulation represent only one part of the functions of the sexual glands. Potency in the man can decline and, indeed, disappear with advancing years, whilst the woman may lose her ovular capacity but in neither case does sexual desire necessarily disappear as well.

Nietzsche has parodied a Latin tag into 'Ut desint vires, tamen est laudanda *voluptas*" When strength departs, lust remains. The function of the sexual glands are by no means exhausted with the production of the sperma and their ejaculation in the sexual act. This is certainly their specific function, but they have other and more general functions which affect the well-being of the whole organism. Consider the common results of castration the voice changes, the hairs of the beard fall out, fatty tissue begins to accumulate around the hips, flat feet and knock knees develop, and so on—not to mention various fundamental mental and spiritual changes.

There has been much dispute about whether these general functions are also carried out by the specific sex glands. Steinach believed in the so-called intermediate gland, and the operation recommended by him consisted in the surrender of the capacity to reproduce by the severance of the spermatic cord in order to encourage this 'intermediate gland to increased activity The same operation is alleged to change homosexuals into heterosexuals and to increase the *potentia coeundi*. The enthusiasm which once greeted Steinach s theories has now died away because in practice the hopes founded on his operation proved deceptive but, despite this, Steinach s great services to the cause of sex investigation remain, and he certainly opened up new avenues of inquiry Voronoff is in a different category altogether His transplantation of monkey glands was a deliberate swindle from the outset. He was not so ignorant as not to know that foreign tissue is completely absorbed by the human organism, and that by absorption it necessarily lost its original function. I made this same statement at the time of the International Physiological Congress in Stockholm in 1926 and the *Svenska Dagbladet* whose reporter interviewed me, published the interview with the still blunter title "Voronoff swindlaren"

Perhaps, on the whole, sexual investigation has been happier with regard to women. The Ashheim Zondek pregnancy reaction in urine has opened up a great field of oestron investigation and considerable success has already been attained in the treatment of disturbances in the female germ glands This treatment sometimes works wonders. It is quite common now for the climacterium to be abolished by this treatment, but the results in the case of an eighty four year-old lady were physiologically truly startling At that advanced age after the treatment she undertook the crossing of the Atlantic in order to be present at the American *première* of a certain actor whose devoted fan she was.

To raise the discussion to a rather higher and more serious level, the result of investigations in this direction compel us to abandon any quietist attitude towards the apparently natural law of ageing A successful struggle is now being carried on against the degeneration of the human organism. If it were merely a question of renewing the sexual urge and sexual capacity in older people, then one might well doubt, for both social and æsthetic reasons, whether the thing were at all desirable, but the fact is that the whole organism is radically almost revolutionarily refreshed the process of metabolism is rejuvenated withering skin becomes young and soft again the hair and the toe and finger nails lose their brittleness and the love of life and general interest in affairs greatly increase, whilst disagreeable phenomena due to the decline of the glandular functions, such as giddiness, depression and so on, disappear as though by magic. In short such success is achieved that we cannot close our eyes to it. As our general attitude to the outside world is a product of our glandular functions, well-functioning glands spell happiness and content. Where an improvement in glandular function is achieved disagreeable negative feelings disappear and are replaced by positive and pleasurable feelings.

When a man is normally sexually potent his potency and his sexual interest are usually balanced, but when a man is impotent this is unfortunately often far from being the case. There are two quite different kinds of impotence in man in the one case sexual interest remains alive, and in the other case it dies. The last case is the more serious, for it indicates that the func-

tioning of the sexual gland has ceased entirely This can be the cause—or the effect—of a nervous breakdown with profound depression This vicious circle can sometimes be broken by prescribing extract of the appropriate glands. Of course, we are still very far from being able to maintain the full sexual functions in all cases. We are unable to restore completely reactive and excitation capacity when once it has naturally declined, but we are in a position to counter the decline of glandular functioning

Life consists of alternating periods of accumulation and discharge. To put the matter drastically the discharge takes place something like an epileptic attack, and it takes place only after a longer period of accumulation. The witty French philosopher Chamfort has described the sexual act as "an epileptic fit of exceptionally brief duration" A more distant analogy to this process of accumulation and discharge is provided by hunger it develops slowly and is quickly satisfied—just like sexuality which develops gradually and is discharged in an orgasm. There can be no physiological doubt whatever about the great benefit of such discharges, and the examples I have quoted are intended to show that in many respects the human organism is like an accumulator which can store up power to a certain limit and then discharge it at need.

At first glance it may seem a little far fetched to bring together such disparate things as hunger sexuality and self preservation, but a closer look will show that they are all satisfied from resources accumulated slowly or quickly and then discharged resources which, of course, we can exhaust. The length of the period required for the accumulation is immaterial as far as the mechanism is concerned. The control, too is varied in so far as it is not automatic.

What about contraception, sterility and fecundity?

The most fundamental and natural task of humankind is to reproduce its species. It is still in doubt whether there is such a thing as the father instinct in nature, but we may not unreasonably assume that there is without special proof. Still, it is exceptional for a man to perform a cosmic and purposeful sexual intercourse—for him it is usually no more than

sexual satisfaction. This is sometimes the case with women too, but not always. Her sexual desire goes hand in hand with her desire to conceive. The mother instinct is more peremptory in its demand for satisfaction than mere sexual desire. It is really a psychological insult to any woman to have sexual intercourse with her and at the same time prevent conception. Circumstances to-day often demand the sacrifice of conception from the woman. Under earlier and more primitive circumstances of life and living the birth of a child was more a plus to the domestic economy than a minus. Under modern conditions the birth of a child is economically a burden and one that can be carried only within certain limits.

You have inquired about contraception without mentioning birth control, the two things are not the same. One of the greatest services rendered by the science of biology is that it has thrown light on the mysteries of conception. From the days of Aristotle we knew something about conception, but really reliable information was provided only with Spallanzani, Johann Hamm and Leeuwenhoek. If the sperma is prevented from entering the womb pregnancy cannot take place. Now there are many and reliable methods of rendering the sperma ineffective, so that we can prevent conception or let nature take its course according to our will. With this we are placed in a position to control the number of children born I know the question of the best methods of contraception is a burning one for many but I do not propose to go into it here, for considerations of space and suitability But one thing I will say and that is that some sort of State control should be exercised in the matter and that nothing should be put on the market without having previously passed a proper test.

A question on a rather different field is the right of the mother to take action to prevent birth once conception has taken place. I propose to speak very frankly here I consider the prohibition of voluntary abortion and the accompanying savage legal sanctions as a mockery of individual liberty as a totally unjustified limitation of personal freedom. The economic, legal and social consequences of a birth are unpredictable, and this is particularly true of an illegitimate birth. This is more than ever true to-day in the state of crisis in which the world finds itself. Un-

fortunate women who in consequence of inexperience, lack of money to provide counter measures, or accident, or what you will, have conceived an unwanted foetus are forbidden to rid themselves of the often disastrous consequences of a momentary happening Such unfortunates must pay the penalty if they are caught breaking the harsh law whilst innumerable others who are better placed can do the same thing with impunity Morality plays no role in this question.

After the Russian Revolution the authorities abolished the laws against operative interference to remove unwanted conceptions. When I was in Russia women could go to their local polyclinic and have the simple operation performed without question. Despite this the birth rate in Soviet Russia continued to increase. The healthy maternal instinct was not impaired by permission to prevent the birth of unwanted children. But when Soviet Russia returned to nationalistic and militaristic ways the authorities once again introduced laws to protect all and any conceptions from operative or other interference. On the basis of my long experience I am firmly convinced that the law is not effective in preventing abortions. Abortion goes on just the same, but it goes on in the dark, performed oftentimes with improper and inadequate means, and often to the danger of the woman concerned. Many many women have lost their lives in this way When this operation is properly performed by trained doctors the risk to life is negligible. The effective advantage to the State of the prevailing legal situation is highly problematical. On the other hand, there are the positive disadvantages of a law on the Statute Book which cannot be properly enforced. Law which cannot be properly enforced is axiomatically bad law In addition, the present state of the law in this respect makes valuable citizens into criminals, and opens the door wide to the cloaca of secret abortions.

The law in this country permits the artificial interruption of the process of gestation only when the continuation and culmination of that process involves danger to the life of the prospective mother Even in cases where the child is likely to be crippled physically or mentally by hereditary factors on the paternal side the law will permit no exception. How much human pain *suffering* and misery could be prevented if the law would

a more liberal attitude in this question and one more in keeping with the spirit of our age! Of course, measures are necessary to prevent a falling birth-rate, one of whose most frequent causes is the deliberate practise of birth control, or rather birth prevention, which expresses itself in so many childless marriages and marriages which produce one child and no more. But the present harsh and unconscionable law is not an effective means to do so

The greatest enemies of sexuality are worry poverty bringing with it overwork and under nourishment, and excessive physical training To put it jocularly sexuality is a half-time job and it must be treated with respect as such. It requires serenity and leisure for its proper pursuit. I have already mentioned that in Germany in the worst hunger period which followed the first world war doctors were faced with the alarming phenomenon that the ovulation of women in the best age for childbirth ceased, and that sexual desire in men fell away until in many cases practical impotence resulted. The Rubens women, not those of Botticelli, are the pre-destined mothers of the race. Good food and plenty of it is one of the most important conditions for any encouragement of the birth rate. If a wise government sees to it that the mass of its citizens are not economically over-burdened that they are given the possibility of having a home of their own and furnishing it comfortably, and that families with many children are given material assistance in bearing their burden, then it will see its reward in an automatic rise in the birth rate.

When couples take on the extra burden of child bearing and child rearing then the wise State will see that they are materially compensated for their sacrifice. All sorts of things can be done in this respect (and, of course, some are being done) school fees can be lowered or abolished altogether education can be made good and inexpensive protection can be given against unemployment, sickness and maternity grants and similar support can be increased, special protection for mothers can be legislated for and so on. Where conditions favour the founding of a family and ensure its future without worry then people will found families and the birth rate will rise. I speak here as a doctor on the basis of my experience, but, in fact, the

problem is more of a socio-political and economic one than a medical one, and therefore I do not propose to go any deeper into this all-important side of the question.

Birth control has no more than a medical-ethical significance, whereas the other problem of sterility is of great interest from the purely scientific point of view I am not referring here to the common cases of malformation in women which prevent conception, or the lack of the spermatic cord in men. These are cases for medical text-books only No I mean cases where as far as one can judge there is no reason why conception should not take place but nevertheless it does not. The statistics of childless marriages are alarming The best brains of our day are engaged on the problem, and any advice calculated to further the prospects of conception is welcome. There is one factor in human sexual relations which militates against conception, and that is the so-called "human position" which is no doubt the commonest in the sexual act as performed by human beings. If any proof is needed that we are, after all, still "four footed animals" then it is the construction of the genital tract.

Everything goes to indicate that the only truly natural position for copulation is what is generally known as the animal position" *a tergo* Only in this position is the internal abdominal pressure negative, and only this position ensures the proper reception of the semen and—what is still more important—its retention. In the "human position" the abdominal pressure is positive and the whole purposeful anatomy of the female interior is distorted, with the result that conception takes place, if it does take place, only when this hindrance has been overcome. It is almost a wonder that conception takes place at all in this position. When it does take place, as, of course it frequently does, then it is only because the ways of nature like those of God, are inscrutable. There is such an enormously prodigal ejaculation of spermatozoa that the natural aim of copulation is often achieved despite the obstacles represented by the "human position" in addition to which, of course, the individual spermatozoon has a life of its own and wriggles vigorously towards its destined apotheosis. Our slogan in this respect must therefore be once again, "Back to nature!" Very little consideration is necessary for any objective person to realize that in "

natural position everything is anatomically in position to facilitate the object of copulation, whereas in the so-called "human position' just everything is anatomically wrong and calculated to hinder if not prevent that object.

As early as the fifteenth century we find Jesuit fathers giving sexual-hygienic advice to their flock. They already knew that the most favourable time for conception was immediately after the end of the menstruation period, and that on every subsequent day the likelihood of conception declined, until round about the seventeenth day it was practically non-existent, and remained so until after the next ovulation cycle. Why should such elementary observations not be made generally known? And why indeed, should not all we already know about the whole mysterious process be made generally known, instead of being left to chance as it is at present. Nothing but proper knowledge can help us to solve our problems.

It is possible that some people may take umbrage at what I have written. I can only reply that towards the end of his days a man does not write his memoirs for schoolchildren. He writes them because he wants mature men and women to take what dvantage they can from the lessons of his life. That has been my object, and therefore I feel there can hardly be too much enlightenment and advice. 'Who brings much will surely bring someone something' said Goethe.

And what about married life in general?

It is a commonplace that mankind, like all other forms of animal life, has a right to exist, and, indeed, the possibility of existing at all, only in pairs, though, of course, from this obvious fact to the legal institution of matrimony is a very far cry 'Love is eternal." That is quite true, but unfortunately for our peace of mind and general comfort it often changes its object. That no doubt sounds very immoral, and, of course, it is. But to call a thing immoral does not deprive it of its existence or prevent men (and women) continuing to practise it. *It is a dangerous* thing for a doctor to set himself up as a moralist. *Nil humani mihi alienum esse puto* But a doctor should stand four square on *a moral* basis, and woe betide him if he ever leaves it or finds it rocking under his feet. He is constantly asked for advice, and

when he gives it, it should be only such advice as can be brought into conformity with ethical principles Now that's all very fine and large, but life itself is not dogmatic. Biological conditions of life, constitutional make up inborn tendencies and just fate pure and simple can all create circumstances which are difficult to fit neatly and satisfactorily into any cut-and-dried scheme of things. Very often they can be wrenched into place by neither law nor violence. Heart and understanding are then the only solution, with the possible addition of human tolerance. It is not a doctor's task to judge. It is his task to regulate and advise. And that advice must be the best possible for the patient and his family in the circumstances prevailing, whatever they may be.

The doctor has to do with the woman rather than the lady and with the plain, though not always simple, man rather than the gentleman. When these two terms are found to be synonymous in any man or woman the conjunction is a happy one, but in the many many cases where they are not happily united in one and the same person, then it is no part of the doctor's business to attempt to wrench them into line or refuse to help where help is required. The German legal axiom that marriage is the foundation of a joint community of interests is a sober and common-sense one. It secures the existence of certain legal and moral conditions, but on the other hand it takes little heed of the individual. And here lies the germ of the conflict from which many perhaps even the majority of people suffer and which results in the great crises of life.

The whole love life of humanity remains mystical. To attempt to set up generally applicable rules is a thankless task. But there are certain generally observable categories which help us a little in introducing some sort of order into the chaos. (*a*) There is what may be called a love instinct, and those in this category seek primarily the satisfaction of a natural urge. Frank Harris as he presents himself in his autobiography "My Life and Loves" falls into this category when he declares revealingly "I was 54 years old before I saw an ugly woman" Most people keep Frank Harris company in this category I think. The object of their temporary affection is not important. Such people can conclude marriages of mutual interest, arranged marriages, or marriages *per procuram*. Love is re-

placed by comfort and use. Quite tolerable marriages are possible on such a basis.

And then there is (*b*) love, properly so called. The Hungarian Petoefi once declared that love could make up for everything, but nothing could make up for love. This sort of love is a cultural psychosis. Amongst savage tribes, and in ancient days before the dawn of human culture, there was no such thing as lyric feeling or expression, although the epic was known and flourished. The epic greatly precedes the lyric in point of time. It was only with the progress of culture and civilization that the poets turned their attention to psycho-erotic effusions. The physico-erotic does not get married because he is unwilling to spoil things with so many for the sake of one. The psycho-erotic marries because he is ready to sacrifice all for one. What can we assume as the reason for this affinity or attraction?

Weininger's mathematical solution of the problem according to which an ideal pair must add up to 100 per cent. masculine and 100 per cent. feminine is strikingly formulated, but as an accurate mathematical equation it is scientifically impossible because the sum contains so many unknown factors. The pairing of human beings is an indefinable conjuncture of suitabilities whereby the peculiarities of each meet those of the other only to strengthen each other mutually. I am aware that this sentence is not all too easy to grasp and therefore it no doubt sounds scientific, but in truth it is a fine cloak for our ignorance. But, at least, when two people fall in love with each other we may reasonably assume that in some way or the other, or in some ways, they are attuned. Is it the sense of smell which produces the effect? Krafft Ebing assumed so because he believed that the sexual brain centre was identical with the brain centre for the sense of smell. Perhaps it is so, perhaps it isn't. We still don't know what it is.

We may reasonably assume that it is a psychosis of some sort because it behaves like one, declining gradually into nothing. The psychosis of love with all its paroxysms lasts on an average three years. I am aware that many sentimental people will raise a loud chorus of indignation at this point, but they won't deceive me, for I know that the shout will come more from a feeling of conventional duty than from real inner conviction.

Such people usually lack sufficient moral courage to admit their real convictions. They have used the word "eternal" so often that some of them begin to believe it, or believe it ought to be, although they no longer feel it. Quite the best thing to do is to let lovers have their heads. They rarely do any damage and sooner or later they come back to a more reasonable view of life and themselves.

And finally there is category (*c*) and it is well to beware of its members. "Sexual bondage" is the mark of this group. Love can be compared to a magnetic attraction, but sexual bondage is a state of ossified junction which can be broken, if at all, only with catastrophic results. The most instructive case in my experience was the famous *cause célèbre* the murder trial of Major Goeben. Goeben murdered Colonel von Schoenebeck because he was in a state of sexual bondage to von Schoenebeck's wife. Generally in my experience the most catastrophic tragedies in the pathology of love have occurred between people inextricably bound to each other in this way. Perhaps the greatest tragedies of all are those between homosexuals, and then it is usually worse as between Lesbians than between homosexuals in the narrower masculine sense.

Lasting marriages are based in the long run not on passionate love but on comradeship, on joint family and material interests, on mutual compatibility, on unconflicting sensual satisfactions, and on comfort and convenience in general. It is quite immaterial whether such relationships are legal or illegal. It has been jocularly said—and with more than a gram of truth—that an illegal pair can live together quite as well as a legally married pair, but not half so badly, because the unfortunate legally married pair have to continue their unhappy life together even after it has become a burden to them both—or at least the obstacles in the way of separation are much greater.

When a love affair is illegal it tends to be firmer than when it is legal largely because of the opposition the world feels it must show to it. There is an element of defiance involved. The pair in question often cling together out of sheer obstinacy. Another very important factor is that each knows that he is free to break the relation if he wants too. Human nature being what it is, this makes it easier to be faithful. I must say quite frankly that

in my experience there is less unfaithfulness and deception in illegal relationships than in legal ones. And again, if unfaithfulness does occur the guilty party if he happens subsequently to feel remorse, finds it much easier to resume the old relation ship than he would if it possessed the indignantly possessive rights of the married state.

As for advice to married people in difficulties—and what married people aren t at some time or the other?—all I can say is that when the originally strong mutual attraction of passionate love begins to weaken—as it surely must—then they should willingly loosen the bearing rein. The skittish partner may break step now and again but he is far more likely to return repentant than if he had to wrench himself loose. In the long run compulsion will hold no one. But 'willing slaves are very loyal

Reading through these observations after having written them I was like all other hypocrites will be, quite indignant with myself at such immorality—but I couldn t persuade my self that they weren t words of wisdom, and so I let them stand. I have often known men return to their wives mortified and repentant, with the explanation that the other woman was no different and certainly no better than the "old one. One might say that the legal institution of marriage is erected as a dam to sexual experience. It continues to exist in defiance of sexual experience. For social and moral reasons it is a necessary and desirable institution and it should be held in high honour in any civilized human society Objectively speaking this is absolutely correct. The trouble, the collision with real, subjec tive life, arises because sex feeling is not dominated by our will, and that man, like almost all other animals, is by nature polygamous. I am not talking here of sexually indifferent people (of whom there are many) but of healthy people of definitely active sexual feelings. Such people are under the influence of instincts and tropisms. All human beings are subjected to the same uniform laws of life. The discrepancy between individuals of various tendencies and the rigidity of the law is the never sealed source of conflict which cries aloud for self help and self regulation.

Virginity and faithfulness are two conceptions with their own

special importance from a racial, tribal and social standpoint, hence the cult of the vestal virgin. It is a scientific fact that a man does not merely cause a woman to conceive his child. He does more he impregnates her with his own essence, and this is the reason why a child quite legitimately the offspring of a second husband can physically (and otherwise) resemble the first husband. In the animal world when once a full-blood has been crossed by a half-breed the full blood will never again breed full-bloods even although the female full-blood did not bear as the result of the crossing Here lies the basis for the privileges which go with primogeniture. However it is an open question whether it would be beneficial either for nature of for peoples to confine matters to such exclusive crossings. As far as the reproduction of family characteristics is concerned the answer is most certainly yes. As far as racial hygiene is concerned a different opinion is possible. In any case, individuals cannot be strictly controlled by general regulations. As Heine has said, with quite a grain of truth Our gentlemen make our servants, and our servants make our gentlemen.

The *jus primæ noctis* certainly tended to improve the breed in the days of chivalry The impregnation of the peasant serf bride by the more highly cultivated Baronial seed secured this improvement. The influence of this right and its exercise has not yet been sufficiently estimated amongst the causes which led to a higher European civilization. If mankind should ever go in for rational breeding it would have to reconsider this mediæval institution

Although most marriages are proverblially made in heaven it frequently happens that the doctor is consulted in the affair Within the same race it is highly desirable that pairs should come together who are not remotely related to each other The strongest possible advice should be given against any inter marriage of related persons. Such marriages seldom take place with impunity catastrophe of one kind or the other is the almost invariable rule. Perhaps Richard Wagner had this in mind when he made Siegfried's parents brother and sister or Goethe when he made Mignon of similar parentage. Byron produced a daughter with his half sister Aurora Leigh the subsequently un fortunate Medora. But Ibsen drew the darkest picture

wrote 'Ghosts' around Oswald Alving and his half-sister In all these cases the tragedy lay not in the prohibited action itself but in its disastrous consequences for the offspring

I see no objection to the legal prohibition of marriages between blood relations, and much in its favour The law already prohibits the marriage of brothers and sisters. Its provisions should be extended to embrace cousins. It would, theoretically also be advisable to prohibit the marriage of persons constitutionally burdened, but such a law would not be easy to administer and in practice therefore it is better not to over-span the bow A reasonable and humane middle path in such matters should be sought.

Another important point is that people who get married should stand in a suitable age relationship to each other The old common-sense peasant rule of thumb according to which the woman should be half the man s age plus seven years, is not a bad one. Thus a twenty-year-old youth should marry a girl of seventeen whilst a fifty year-old man should marry a woman of thirty two and so on. This rule is quite generally applicable with advantage. The offspring of a thirty-year-old woman are the best developed. This has been demonstrated true in long experience and we can stand by it safely though it is hardly necessary to point out that the exceptions are many Generally speaking the third child of a marriage is the best developed both physically and mentally and I think this is due to the fact that maturer women bear riper fruit. The parents have grown older they have become mature without yet ageing, they are at the peak of their powers.

On sound principle, of course, only thoroughly healthy people should found families. It is a great burden to the country if its youth is weakly However once again, it is not always possible to secure the upholding of this principle, and in any case, there are also exceptions to it for instance we know that Beethoven was the son of a heavy drinker whilst Johann Sebastian Bach had half-wits amongst his ancestors. On the other hand Chopin, whose father was a powerful blacksmith, was a puny weakling who died at the early age of thirty nine

Marital advisory clinics are very valuable institutions and they should be established on a wide scale. This is something

the Government can see to beneficially but it is inadvisable that it should go much farther Hitler introduced compulsory sterilization centres to prevent the production of children by hygienically unsuited people. We don t want to copy his methods, but at the same time everything possible should be done to persuade, let us say persons burdened with hereditary insanity cretinism, etc., from producing children.

I had just written these lines in November 1943 when over the wireless I heard of the death of Max Reinhardt. I consider Reinhardt to have been a theatrical genius. But what were his physical antecedents? His father was normal, but his mother was weak-minded. She produced nine children, two of them were eminently talented (one, as I have said, was a genius) two or three others were normal, whilst the rest were uneducable. If man made laws had prevented that marriage, one genius would have been lost to the world. Children are produced by two people, but no one can say according to what laws children inherit, or what part each parent has in the final result. One parent will often be obviously predominant in the child, and, in any case, it is as well to remember that nature has great powers of adaptation and compensation.

There are sterile marriages in which each partner has already proved in former marriages his and her capacity to reproduce. However the most usual thing is that sterility in a marriage can be put down to one of the two partners. We have already discussed the question of female sterility Where the man is sterile it may be due to *impotentia coeundi* or *impotentia generandi* or both. In the former case the question of artifical insemination can be discussed. The male seed can be artificially introduced into the uterus. Russian peasants have used this method in their cattle-breeding since the days of Olim. Doederlein and Kroenig experimented with it successfully in Germany forty years ago Their success was forgotten and it is only in recent years that the matter has again come to the fore. From the medical point of view there are no sound objections but from the standpoint of jurisprudence there can be many misgivings. However since experience has proved that children conceived in this fashion cannot be distinguished in any way subsequently from children conceived in the normal fashion doctors can

moral grounds. I think we can leave the latter most properly to the Church. The objection of the State that homosexuality undermines its great aim of securing sufficient cannon-fodder is quite a mistaken one from the national hygienic standpoint, and, in any case, offspring resulting from any kind of compulsion are more often harmful than beneficial to any State. Thus such inhuman and nonsensical legislation achieves no beneficial results whatever On the contrary it does considerable damage. The greatest damage it does is to intimidate many respectable and often highly valuable people at the zenith of their creative capacities their intellectual productivity is hampered, they are often victimized by that worst of all criminals the blackmailer and they are socially stigmatized

One is almost ashamed to put such obvious truths down on paper they are so crystal clear—and yet the shameful laws remain in force. Public humanity all along the line is the declared programme of all parties, but as soon as certain facts come under discussion the humanity ceases. The whole situation reminds me rather of the reaction of a well-known philosemite. At a meeting someone openly expressed the suspicion that his philosemitic proclivities came from the fact that he had Jewish blood in his veins. His indignation knew no bounds, and he sprang to his feet excitedly demanding an apology for the insult offered him. The humane legislator who is hostile to the homosexuals obviously wishes to forestall any suggestion that he might be one of the others I am quite prepared to risk any such accusation in my case. I can do it with a clear conscience.

Up to now we have been discussing hereditary homosexuality but what about the acquired variety? Here a closer examination of the particular circumstances is required. In our social and legal environment to-day sexuality of any kind has its pit falls and its traps for the unwary There are dangers which everyone must avoid for himself. The struggle for existence (half of which is procreation) demands the expenditure of a great deal of energy Whoever is not fully up to this task can easily suffer damage in a society such as ours. Sexual maturity sometimes appears at a very early age There is the individual crisis of puberty There is the mystic and powerful urge to satisfy a desire which is purely instinctive. All these things

represent rocks on which the individual bark can shatter. Enlightenment is the only thing which can help. The stronger the urge, the more powerful must be the inhibitions which dam it. The truly moral man is the victor in this conflict. Morality is an expensive attainment. It is the privilege of *homo sapiens* as against the *animal sapiens*. There are many factors in our modern civilized life which work counter to the normal and instinctive urge: education, morality, religion, lack of opportunity, lack of a suitable object, and finally such inhibitions as fear of infection, fear of pregnancy, and all the other social and economic consequences.

The individual must run the gauntlet of all these things. The strong and vigorous will gird his loins to make the passage safely, but the weakling will often seek a way of escape in masturbation—or perhaps in homosexual mutuality. In these two ways the battle can be avoided. Other factors enter into consideration: the separate education of the sexes, male comradeship in games and sports, army life and so on. All these things militate against any normal relations between the sexes, and sometimes prevent them altogether. But the natural urge of every individual to attach himself to another individual remains, and homosexual satisfaction often develops from male friendships even when originally no strong inclination in that direction was present.

These are some of the potential causes of voluntarily accepted homosexuality. But even apart from any such semi-compelling circumstances, homosexuality can be developed by an exaggerated protection of the female sex. Any attempt at approaching a woman can lead to extremely unpleasant consequences for the man if the woman so wishes. There are sufficient examples of how quite innocent situations have been construed into crimes. In the case of a nervous, over-anxious man the simplest thing often appears to be to avoid women altogether. If the State wishes to protect and encourage healthy sexuality, then it should grant no special protection to the female sex. The individual, of whatever sex, has sufficient protection in any properly ordered society. Everyone must look after himself with the provisions which protect us all. The idea of "the weaker sex" is an anachronistic survival from the middle ages. To-day women have equal

rights with men in the professions and so on. They are quite capable (and how!) of looking after themselves in sexual matters If women court danger they must be prepared to face the consequences. The upholders of the same moral code for both sexes have won their point, and rightly Now let them abandon all special protection for women as no longer necessary

Special protection for women as such is more than unnecessary it is an insult to women and their proper independence The bride is still regarded as a sort of comic victim, and the legislation which still protects, or supposedly protects, 'the poor female is just as comic. Enlightenment is what is needed, not old fashioned mollycoddling Widespread sexual enlightenment will raise public morality to a much higher level than any amount of police protection ever will. Sexual hygiene and the significance of sexual functions should be taught in every school as a normal part of its curriculum. The present taboo for both pupils and teachers should be removed. In this respect it is not a question of what, but of how Let it be done and we shall see that *naturalia non turpia sunt.*

A very different thing is of course, the protection of minors, but even here there should be no distinction between the sexes. The children of both sexes must be protected, and whoever commits an offence against either girl or boy should be subject to condign punishment. I am firmly convinced that no intelligent self respecting woman wishes for any form of grandmotherly legislative coddling The brutally possessive morality of the crusading ages (not that it was so very successful) is out of date in the twentieth century In our day there are a great and sufficient variety of obstacles to frivolous and irresponsible sexual intercourse In the interests of public sex hygiene no State should pile up still more hindrances calculated to isolate the sexes still further

Hereditary homosexuality and acquired homosexuality are two fundamentally different things, and they must be treated as such in every respect. Hereditary homosexuality bears physical stigmata. The secondary sexual characteristics of men who are hereditary homosexuals are usually feminine. Their pubic hairs very often do not grow in a rhomboid shape up to the navel. The hair growth under the armpits and on the chin and

cheeks is often sparse. The voice is often eunuchoid and high pitched, the hair on the head particularly luxuriant the breasts (as distinct from the chest) are more strongly developed and the nipples slightly erectile. I could mention many other similar stigmata, but the most important thing of all, and the one I wish to stress most strongly is that such men are abnormal not only in the physical, constitutional sense I have described but also functionally The expert can recognize them from their attitude and their movements and by their hypersensitive reactions.

This difference is most obvious in the movement of the arms. They use primarily their forearms as though their shoulder muscles were paralysed and the upper arm is normally kept pressed against the body Their wrists are usually over mobile and they gesticulate with their fingers. One might say that their arm, hand and finger movements have a centripetal tendency whereas the movements of a normal man are centrifugal. The general movement of homosexuals can be described as closed, whilst that of normal men is open. When homosexuals dance, lecture or act on the stage they generally keep their upper arms pressed to the body And when they move from place to place they do not stride vigorously and freely like normal men they trip along and often there is a decided feminine roll of the hips.

When a normal man dances he embraces his partner willingly with his right arm, which he lifts far above elbow height. In moments of pathos the normal man is inclined to open his arms. Of course, here, too there are all sorts of stages from the extreme manly to the pronounced feminine, but with some confidence, if with some caution, we can say that the sexual power can be measured by the angle at which the upper arm stands away from the body in use. Recall the pictures of that virile bull Mussolini addressing his followers his arms are outspread vigorously as though he would like to grasp the whole world. And compare him with that asexual rice pudding vegetarian Adolf Hitler who wouldn t raise his arm properly even to execute the gesture of greeting named after him, but who just feebly raised his underarm in reply

Everything we know goes to show that homosexuality where

it is hereditary is due to constitutional forces and coercive urges, which although they can be suppressed by violence should not be punishable, because they are more elementary than the inhibitions which operate against them. To despise and outlaw such people instead of feeling sympathy for them is in accordance neither with objective justice nor with the present stage of our psycho-biological knowledge.

Another phenomenon on this field should not be ignored. Experience shows that when normal sexual excitation declines with advancing years homosexual tendencies often begin to make themselves felt. Let judges therefore take to heart the classical axiom *Nemo beatus ante mortem.*

Many sex investigators, and in particular Steinach and his school, have contended that by means of operations or dosages with hormones homosexual tendencies can be changed into normal heterosexual ones. I have no grounds for denying this, but from my own experience I cannot confirm it. There is no doubt that bi sexual individuals exist Such people are capable of reproducing the species. But first of all these are exceptional cases, and secondly their normal sexual activity (often performed against the grain) is often used as an alibi to ward off charges which relate to their other and abnormal sexual activity This is the reason why so many homosexuals avail themselves of the protective screen of marriage.

To change the subject rather abruptly what do you think about stimulating drinks including coffee and about smoking?

The horrors that some people describe as in store for us if we go on enjoying ourselves in various more or less harmless ways are almost enough to embitter our enjoyment of the sweets of life—but not quite, fortunately It is as well to bear in mind that any prohibition of this nature limits the pleasures of life, and for a healthy man or woman one of the purposes of life is to enjoy it. Unfortunately life is short and it is very often hard, and therefore a doctor should be sparing in his prohibition of this or that more or less harmless pleasure, and he should issue his fiat against it only when he is truly confident that the sacrifice will really bring sufficient compensation to the victim in the shape of better health. So much for a general and liberal attitude. How

ever the doctor must, of course, always remember that most people, and in particular most patients are insatiable and undisciplined they are not in a position to impose inhibitions on themselves however desirable they may be.

By a *reductio ad absurdum* even the most harmless foodstuffs, drugs and medicaments will become harmful and even poisonous if they are taken excessively Poison is, in fact, more a quantitative than a qualitative factor In other words, almost any substance can be useful in proper doses and harmful in overdoses. For this reason and where possible I favour the golden mean rather than prohibitions. A point in which general medical opinion goes wrong is that it often makes a part of the medicament, or whatever it may be, responsible for the effect of the whole. Fortunately pharmacological science is far enough advanced to-day not to identify the complex effect of the medicament with the individual components which can easily be extracted from the drug Pharmacology is beginning to return from morphium to the mother substance opium from atropin to belladonna, from digitoxin to digitalis, and so on. The better effect obtained with the natural, unprepared plant as compared with the prepared substance is due to the synergic effect of the many properties contained in the natural plant. In pure form the extract often produces diametrically the opposite effect to that produced by the natural substance.

When we speak of the effect of alcohol we mean all drinks which contain alcohol, but when we speak of coffee we mean the caffeine found in it, and when we speak of smoking we are referring to nicotine. This *pars pro toto* conception has come about as the result of pharmaco-chemical analysis procedure which has isolated certain prominent constituents of whatever substance may be in question and demonstrated its poisonous properties by experiment. The lessons of such experiments have been applied to the drug or whatever it is, as a whole, and thus the effect of a complex substance has been identified with that of a few isolated components of that substance. The natural step after this was to extract these components from the mother substance and then sell the raw material deprived of its poisonous components to the public as harmless and even beneficial. This scientific procedure of "castration" as one might

call it, presented a relieved world with tobacco without nicotine, coffee without caffeine and non alcoholic wines.

Let us deal first of all with the demon alcohol. In the whole gamut of pharmacology I have been unable to discover a single convincing experiment with pure alcohol which demonstrated convincingly the devastating effects normally ascribed to drink. General experience, which any enthusiastic experimenter can make his own if he wants to indicates that various alcoholic drinks have various effects. The stimulating effects of drinking say Rhine wine or Burgundy the effect on the soul, if I can put it that way of drinking Sauternes, or cognac, or some similar liqueur the effect of drinking champagne, or beer are all different and incomparable. Similarly the symptoms of acute intoxication which all these drinks can produce if taken to excess and also the accompanying and after effects are also all different. If it were the alcohol and the alcohol alone which was responsible for the effect of alcoholic drinks, then clearly in the last resort the effect would have to be the same no matter what kind of alcoholic drink were involved, but it most certainly is not, and therefore we are entitled to assume that there must be something else in all these particular drinks to produce their specific effects. It is primarily the etheric oils and other extract substances which give an alcoholic drink its particular character and taste. They lose their poisonous properties with age and they affect the alcoholic properties.

When we see the damage done by excessive drinking to the brain, nerves kidneys and liver amongst patients from poverty stricken circumstances then we are compelled to assume that the damage was done by the fusel contained in large quantities in the cheap alcoholic drinks they consumed. Any doctor in private practice who has well to-do patients who drink a lot knows of men (and women) who drink far more than these other poor devils without doing themselves much harm. Why? Because they are in a position to drink good and expensive wines, etc., which have had time to mature.

The same consideration can be applied, *mutatis mutandis*, to other stimulants, for instance smoking Here again the poison chemically isolated from the mother substance, the tobacco plant, and given *the name of nicotine, has been made the para*

digma for smoking altogether It would be foolish to attempt to deny the highly poisonous properties of nicotine and therefore the possibility of nicotine poisoning, but it would be advisable to formulate the question rather differently Does the pleasure experienced in smoking depend on the presence of this poison nicotine alone, or is the pleasure due to the sum of the whole constituents of the tobacco plant and the substances produced in the burning? Here too the effect will depend on the etheric oils present in the tobacco leaf At this point it is also interesting to bear in mind that cheap cigars contain the greater quantity of nicotine and are much more deleterious to health than the noble leaf from which imported havanas are made. Such tobacco shows a very low nicotine content. In addition Havanas do not lend themselves to chain smoking so readily as their very much poorer relations.

As in the case of alcoholic drinks so with tobacco; we are forced to the conclusion that it is not the nicotine alone which produces the total effect of smoking, but a conjunction of the nicotine with the other not yet analysed and still-unknown substances The horrible examples we find sprinkled liberally throughout medical literature on the subject refer to the devastating effect of pure nicotine and not to smoking as such at all This hateful, I might almost say puritanical, way of looking at the matter has led to thunderous condemnations of smoking The verdict has been so apodictic that the possibility that smoking as such might even be beneficial to the human organism has never even been discussed. Once again therefore the effects of nicotine poisoning should be distinguished strictly from the effects of smoking as such. Although very little is yet known chemically about the various ingredients of tobacco it can already be taken as quite definite that it is not merely the origin which influences the effect and the taste of the tobacco but the quality and taste depend also on climatic influences during the drying period, and on the various methods of treatment to which the leaf is subjected before it is made up It is rather these incidental factors which determine the various aromas and the quality of the tobacco.

On the basis of these facts much might be achieved as an instance if a doctor persuaded a patient to change his brand. In

after exhausting attacks of angina pectoris the drinking of coffee has a beneficial rather than a deleterious effect and in such cases it encourages sleep

One thing I must reject as quite out of place in any discussion of this civilizatory achievement of mankind, and that is a comparison with the animal world whose inhabitants never touch any stimulating food or drink all their lives. Alcoholic drinks, coffee and smoking are necessary compensations for the highly organized civilized life we lead Such a life makes a much greater demand on nervous energy than any primitive being would be able to stand To talk about 'Back to Nature!' whilst retaining a life of telegrams, telephones, wireless, motor cars, aeroplanes and other exciting and nerve-exhausting factors is as stupid as it is useless

The pleasures we have been discussing here compensate for the excessive demands which are made on our physical and psychological powers and therefore on the whole they are beneficial rather than otherwise. The damage that such pleasures can do if indulged in to excess is no greater than the damage that can be done to the body by say the excessive drinking of water or by the excessive consumption of good, wholesome foods These little pleasures must be taken in moderation, just as food must. Only incorrigible obstinacy and prejudice will insist on seeing death at the end of life as a result of its few pleasures instead of realizing that it is life itself which is the poison which inevitably leads to death at last, and that for all of us, drinkers and non-drinkers, smokers and non smokers alike.

And now for the last and saddest question of all what about old age, and death?

Our lives are subject to the eternal cycle of development and decline. The whole of life is a process of birth and death. However let us not take up our space by philosophizing, but let us deal rather with the individual as the subject of this cycle. Each individual without any exception whatsoever is subject to the process of ageing which begins the moment he is conceived and goes on in an irrevocable process until death comes. In this general process of ageing the individual units of the human organism are subject to differing cycles As long as the indi-

vidual cells retain the ability to regenerate themselves, that is to say to discard and rebuild the process of life as a whole will be maintained However with every cycle of discarding and re building once the body has reached maturity the ability of the successive cell to regenerate declines gradatim, and we can then say that the process of ageing really begins. Each type of cell has its own cyclical period and this is unchangeable. Here too there is an order of vitality Generally speaking one can say that cells with a shorter span of life regenerate more quickly whilst other cells with a longer span of life regenerate more slowly For instance germ and blood cells have a very rapid regenerative faculty and they are much more sensitive to radio-active phenomena than muscle or nerve cells.

This highly important question of the varying cyclical periods has been rather neglected by scientific research as yet, but the medical practitioner knows from experience that certain organs take longer to heal than others once they have been damaged One thing is quite certain within a definite period, which varies as between cell and cell as I have said, all cells are re newed and the mother cells are absorbed into the body and eliminated Thus in every living organism there is a constant and harmonious process of birth and death, a process which gradually exhausts itself and ceases. Thus in every living organism there must be two distinct phases. In the first, that is during growth to maturity the energy generated exceeds the process of decline, which naturally goes on even in this phase. Once the peak of maturity is reached the process is reversed the process of decline is greater than the process of regeneration and the body gets old. If this process is regulated by the hormones then it is clear that either the effectiveness of the hormones declines in time or that the cells gradually lose their reactive capacity The truth is probably that both these things happen together otherwise it would be difficult to understand how when the hormone effectiveness is increased by dosages of pure glandular extract the power of regeneration is increased.

Just as rejuvenation does not exhaust itself in causing the sexual function to flicker into activity again, so the process of ageing is not confined to the decline of sexual potency Both rejuvenation and ageing are general processes in which various

organs always react, but in varying ways. This can be seen most clearly in the eye, which with advancing age and the invariable change in the refractory media gradually and measurably becomes far-sighted. With advancing age, too and most noticeably the flexibility and the elasticity of the muscles, the joints and other moving parts decline. The movements of ageing people become slower and less vigorous, the process of co-ordination takes more time.

If any practical definition of this process of ageing is required then one might say that ageing is a decline in the reactive ability of the organism Efforts have been made to measure these reaction times and to put the results to practical use, for instance in testing *pilots* and motorists to discover how quickly they react to warning signs. Here too it has been found that generally speaking the older a man is the slower are his reactions, so that an old man is, on the whole, less likely to be able to avoid an accident by presence of mind and rapid physical reaction. We are faced with the problem of self-defence here. Ancient mythology gave *children* a special god to look after them, and the Christian Church gives *them* a Guardian Angel who watches over them. Their rapid and instinctive *reaction* to danger is put down to divine providence If a child falls out of a window it immediately and instinctively adopts the embryonic position and that is the position in which least damage can be done to it.

The receptivity of the brain which is so *rapid* and so great in youth, gradually lessens, and soon it lives primarily on the reserves *it* has accumulated in youth. I believe that the great natural philosopher Wilhelm Ostwald was right when *he* declared that there was no essential addition to life after the twenty-fifth year There are others who deny this and point to the fact that most great achievements fall into later life. That often appears to be so but when they are examined more closely *they* turn out to be nothing but elaborations of youthful conceptions. Such youthful conceptions naturally become more mature with advancing years, the routine of life and thought is more efficient and the whole is more rounded, but the fact remains that the final urge came from an earlier germ. I do not believe that a man goes on learning until the day of his

death. The unfortunates who go on learning never do anything outstanding in art they remain duffers, and in science they remain their own assistants.

The closer man approaches to his end the more physical and other feelings and inclinations change. This change does not come about with dramatic rapidity but gradually and each day that passes seems just like the one which preceded it, but it is not. It is only with the years that the changes are gradually forced to one's notice and one realizes that one has adapted oneself to one's age. Tenderness and affection are turned towards one's children, and later on, and still more so, to one's grand children. Different values are placed on the various phenomena of life, and ambitions are reduced The need for peace and quiet becomes greater A man becomes cautious and inclined to consider carefully first before acting A man is inclined to conserve what he has rather than to increase it. Thought tends to become egocentric and the personal circle becomes more and more limited. Characteristics become more clearly marked. Auxiliary characteristics disappear The essentials intensify and with age we see the personality become more and more definite.

The increasing subjectivity of age brings with it a certain lack of human understanding The modern world old people see around them is a very unsatisfactory one. Old times were best, and present times are worse and sadder An ageing man be comes a *laudator temporis acti* He no longer understands young people and he has no sympathy with their to him, irresponsible love of life, their yearnings and their need for love. Thirty years ago the women were beautiful to-day they are unattractive And so on.

This is an inexorable and natural process, and because it is perfectly natural there is nothing essentially tragic about it. Only if the process of involution does not proceed harmoniously if there is a disproportion in the ageing if one or the other function slows down or ceases prematurely and in particular when the mental processes decline, does the picture of normal ageing turn into the pitiful picture of senility Senility is a tragedy because the personality dies before the physical body The vegetative functions are still proceeding but the spiritual

superstructure has decayed and spiritual control has ceased. The hulk is still there, but the bridge is deserted

Nature is merciful to age and the victim seldom notices the greatness of the change which time has gradually brought about, including even the decline of mental capacity Gradually there is an increasing willingness to help on the part of others An increased human tolerance surrounds the ageing man. He is no longer contradicted. Things are no longer so awkward and obstinate for him. His long stories are listened to patiently Utterance becomes wise and authoritative. Every thing becomes distorted and dishonest, and for the first time he receives more than he claims. The life of an ageing man is based on consideration, and he notices his weakness by the spontaneous willingness of others to assist him. Discussions which are conducted in his presence are uncomplicated and soothing in order not to upset him. His old bad habits are no longer opposed, but perhaps even encouraged When he walks he is offered an arm to lean on. The hallway and the stairs are lighted up specially for him. The scarf is carefully adjusted round his neck, and his food is prepared with more than usual care. Visits become shorter but more frequent, and although the last flicker of vigorous human dignity revolts against this treatment age finally submits to it gladly because first of all it really is comfortable and secondly it is motivated by kindness and one is helpless against kindness. A man can defend himself against hostility but what can he do against kindness? Hostility can make one's life very difficult temporarily but kindness can spoil a man's life irretrievably The first period in which the victim has not yet noticed that he has grown old whilst all around him have seen it clearly is a tragi-comic one until he realizes that he has become in need of help and consideration. That is the stage in which an old man feels young again only in the company of friends of the same age as himself. They can still treat each other as they did in their younger days without particular respect frankly jocularly and with a refreshing lack of special consideration. This is a pleasure only for the old people. If young people are present they are moved to sadness.

In any discussion of the subject of death the problem of

euthanasia naturally arises, but rather than enter into controversy on this much disputed issue I prefer to describe an experience which speaks for itself. It concerns the death of a woman during one of the most highly political periods of the German Republic in 1923. The woman was the wife of the German Reich's Chancellor Luther. I spent many hours as a doctor at her bed-side. The case proved hopeless. When the sick bed had become her death-bed her unfortunate husband sat with me as long and as often as his onerous State duties would permit. Frau Luther was suffering from an inoperable tumour and its extensions had affected the throat and the intestinal tract. The jaw was locked and only artificial feeding was possible, and at the same time a series of operations had to be performed, not to save the patient's life or restore her to health, but merely in order to make her functions still possible. It was one of those tragic cases in which the doctor knows perfectly well that there is only one merciful and proper thing to do: to hasten the end and make it as swift and painless as possible. However, he also knows that he must not do it. The law categorically forbids such an act of simple humanity. The suffering patient may not be released from his sufferings even if he pleads with the doctor for death.

Even medicaments to ease the pain of death (euthanasia) may be given only in doses far below that necessary to bring about death. With the agreement of the patient and his nearest a human and self-sacrificing doctor will go to the very limits of the permissible when faced with such misery and a completely hopeless existence. He will anxiously prescribe only the maximum dosages permitted by the official pharmacopoeia, or only very very little in excess. Even in extreme cases he will seldom be prepared to risk a conflict with the prevailing law. Almost any doctor who has been in this position will agree with me that a change in the law is necessary and desirable. A hopelessly sick and slowly dying patient should be given the legal right to demand the administration of an easy death.

Towards the end of his days a very sick person develops an entirely different psyche. Very often nobility of character and personality is revealed only on the death-bed, and it is here that the most moving and elevating moment of a whole life

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